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# FIFTH ANNUAL REPORT

ON THE

Medical Inspection of School  
Children in Dunfermline,

1910.



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## Medical Inspection of School Children in Dunfermline,

1910.



By J. C. BRIDGE,

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MEDICAL OFFICER OF THE CARNEGIE DUNFERMLINE TRUST.

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# REPORT.

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*To the Chairman and Members of the  
Carnegie Dunfermline Trust.*

GENTLEMEN,

I beg to submit my Annual Report on the Medical Inspection of School Children.

During the past year the inspection has been carried out on the following lines, namely:—Complete examination of the children at the four school periods, inspection of every child, and a complete examination of those children with special defects, or who, on inspection, are deemed to require special examination. In this way 4454 children have been examined and inspected during the year in the course of the routine inspection of the schools.

It is gratifying to be able to state that progress has been made in all those branches of Medical Examination of School Children which were foreshadowed in my Report of last year. I refer mainly to the establishment of a School Clinic, including a Dental Department, and a children's Labour Bureau. These will be more completely dealt with subsequently. Included in the Report will be found a brief summary of the sanitary conditions of the schools.

Reports of this nature would be useless unless

those entrusted with the drawing of them up and with the examination necessary for obtaining information upon which these Reports are based, could at the end of the year feel that the knowledge so obtained enabled them to suggest some improvements which they consider might be for the betterment of the children of school age. The mere collection of figures is a trifle in connection with the work of Medical Inspection. Every School Inspector should form an ideal standard which it should be his object to attain. The modification of this ideal, for better or for worse, depends partly upon himself and partly upon his environment. Recommendations to Boards and others are too often considered by these authorities as personal matters, and as reflecting either on the previous management of that authority, or as a mere whim of the person recommending the improvement. It is sometimes, therefore, no easy matter for the Medical Inspector to keep his ideal as high as it should be kept. The support which I have hitherto received encourages me to lay before you fresh schemes, which will be found outlined in the following pages, and which I believe will receive your careful consideration.

In the following Report reference will, unfortunately, frequently have to be made to delicate children. Some of them will be considered as suffering from special defects—tubercular disease of bones and joints and other organs, anaemia, etc. There are, however, a considerable number without any condition which can be classified under any particular heading, except that of bad nutrition, who, nevertheless, are below the average standard of growth. This, in the absence of any definite signs, points to imperfect development, either on account of the quantity or quality of the food

supplied, or else from a condition of the body causing mal-assimilation of food, produced in many instances by conditions under which they are forced to live. In any case, these are the children whom, among others, Medical Inspection brings prominently to the fore.

Medical examination is not required for the healthy and the robust, except in so far as it prevents any untoward influence being brought to bear upon the children likely to interfere with their growth and progress. But Medical Examination, as has been admitted by the establishment of the School Clinic, fails if it ends at merely recording the fact of such and such a number of children failing to come up to the average condition of health. Some measures require to be taken to prevent such children from slipping further and further back in the scale of efficiency until they leave school. Before they reach that period of life, many succumb to disease, to which they are always a ready prey. These are the children who, if they live, will find employment difficult and who will ultimately, in all probability, be constant inhabitants of sanatoria. By that time not only will they have to be provided for, but also others who are dependent upon them. It is an economic provision if we endeavour to prevent as far as possible such a sequence of events and to restore to delicate children, before it is too late, a bodily condition which will enable them to resist disease. That this can be accomplished, at any rate to some extent, is fortunately possible. The benefit to be derived will be present from the day the remedy is applied, although, as in all preventive measures, the full results will not be seen for many years. Recovery Schools, Open-air Schools, or whatever they may be called, have shown their value, and I confidently expect

that it will not be long before the advantage of an institute such as this will be given to the children of this town. Public or private funds expended in the erection of such an institution will pay a high rate of interest, if not in actual coin of the realm, in health, happiness, and prosperity to the rising population. Such a school would necessarily have to be situated at some little distance from the homes of many of the children for whom it is required. With the existing tramways, supplemented by a special conveyance, I do not think this need present any difficulty. In regard to a special conveyance, there is need of some such arrangement at the present time to bring some of the more delicate and crippled children to the schools. Beyond the initial cost of the conveyance, this scheme would not entail a great expenditure, yet at the same time would be a great saving of energy and a freedom from discomfort and pain to quite a number of children who are at present daily attending the schools.

As in previous years, I have to record my thanks to the Medical Practitioners of the town. That the School Clinic has been able to be opened and the work continued is due to their kindly consideration and co-operation.

The Head Teachers and their Assistants continue to show the same interest in the work, and though each year demands more of their time and the routine work of the school has in consequence to be more frequently disturbed, their willingness to assist remains the same. I take this opportunity of expressing my thanks for their assistance.

It is impossible to mention the teaching staff of the schools without making reference to the loss which this body has sustained during the latter part of the



year. I and my staff were necessarily brought into very close association with Miss Simpson, who was headmistress of the largest infant department in the town. The interest she displayed in the welfare of the children in every way will make her place hard to fill.

The Medical Officer of Health, Dr. MacGregor, and the Public Health Authority have, as formerly, co-operated as far as possible in all matters relating to this department, for which help I am much indebted.

I would like to express my thanks to Dr. Janet Mouat, who has undertaken a large share in the routine work, and to the School Nurses and other members of my staff who have worked so loyally to bring the many experimental undertakings to a successful issue.

In conclusion I have to acknowledge the courtesy and consideration extended to me by the Members of the Carnegie Dunfermline Trust and Burgh School Board in all matters relating to this branch of my work.

### **SCHOOL BUILDINGS.**

The schools under consideration are nine in number and are situated in various parts of the town with the exception of two. These lie just on the outskirts and are practically rural schools.

The surroundings of the schools situated in the town vary considerably. The older schools are less well placed than the more recent buildings in consequence of their being built around and hemmed in. The proximity of the houses and other buildings, in two instances in particular, does not tend to improve the healthiness of these schools, and greater care is required in the supervision. The majority of the schools are well placed, and stand in open spaces at considerable distance from disturbing influences.

#### **Buildings.**

The buildings of the schools are of three types, varying according to the period in which they were built: (a) the one-storeyed school; (b) schools with two or more storeys; and (c) the central hall type of school. When schools have required enlargement in the past, new buildings have been provided for the senior departments; thus the infant departments are usually to be found in the oldest part of the schools.

#### **Accommodation.**

The question of increased accommodation has arisen during the past year. It will probably become acute during the next few years. It has already done so in the case of the infant departments of some of the schools. The matter is receiving consideration, and, therefore, it is only my duty to call attention to the fact and to point out that it is as well to prepare for increasing the accommodation before actual pressure arrives; otherwise overcrowding will occur while steps

are being taken to provide the increased space. The policy of providing a new school rather than extending an existing one should receive careful consideration.

### **Class-Room Accommodation.**

The number of children in each class has almost without exception reached its maximum. I am further of opinion that at the present time the number of children in many of the classes is too great. One teacher can give little or no individual attention to a class of 60 or 70 children.

### **Ventilation.**

In all the schools "natural" ventilation is the method relied upon, by means of open windows and various contrivances, for the entrance of fresh air and outlets for impure air. On the whole the class-rooms are not as well ventilated as they might be. The air has been tested in a great many of the rooms, and the results have shown in the majority a badly polluted air. This is to be attributed largely to the want of care on the part of the teachers and is to be regretted. Children should, as far as possible, be taught the value of open windows and fresh air. The example set in school and the habit acquired there will, it is hoped, extend to the homes. The best mental work is not obtained either by teacher or taught in a foul atmosphere. I am fully alive to the difficulties which are constantly occurring to the teachers by reason of complaints of draughts from the children and their parents. The fact that comparatively fresh air is obtained by some of the teachers in their class-rooms leads me to believe that it is possible for all. Certain constructional improvements in several instances would undoubtedly assist. The importance of thoroughly flushing the class-rooms during the intervals is very generally recognised, but exceptions have been met with. Teachers require fresh air in the interval as much as the children, but whereas the children find it in the play-

grounds the teachers, to the detriment of their health, usually remain indoors.

### **Lighting.**

The lighting of the class-rooms, as a whole, is fairly efficient. There are, however, exceptions. In these it is not so much due to want of light as to the direction in which the light is admitted. This question has been raised in considering the vision of the children, and it is sufficient to point out that in most cases the difficulty could be overcome by a rearrangement of the desks in the class-rooms.

### **Warming.**

Hot water pipes are universally adopted as a means of warming the schools and have proved sufficient. In many classes a temperature chart is hung up, and the temperature of the room regularly recorded. I would recommend that similar ones should be kept more generally. With very few exceptions thermometers have been present in the class-rooms when my visits have been made. Every class-room should be supplied with one of these instruments.

### **Cloak-Rooms.**

The cloak-room accommodation is on the whole inadequate, and is not provided in some schools, stairs and corridors being utilised for this purpose. In the Infant Department of Commercial School, part of the central hall is utilised. As the remainder of this room is frequently used for teaching purposes it is obviously a most undesirable condition. The question of increasing the accommodation of this school is one of urgency. It would be as well to consider the provision of suitable cloak-rooms at the same time.

### **Hand Basins.**

On my inspections these have been found kept in a cleanly condition. The infection that may arise from

children using dirty water is important, and all the newer schools are provided with basins which to some extent remove this danger of infection. The washing arrangements in some schools are very unsatisfactory, and this matter should receive most careful consideration at an early date. The number of towels supplied to the schools daily does not seem adequate, if encouragement is to be given to the children to wash frequently during the day.

### **Sanitary Arrangements.**

Until this year all the closets were of trough variety. During the past year new closets have been provided for two schools. These are separate closets with separate washdown pans provided with separate flush. Education in all that pertains to decency is important in the educational scheme of the child while at school. The offices of the Infant Department of St. Leonard's School are far too close to the school itself. The windows of some of the class-rooms open directly over the offices. On my visits I have found the closets well kept and in a cleanly state.

During the winter trouble was occasioned by freezing of the water supply. It would be worth consideration as to whether an extension of the heating arrangements could not be made to these buildings to obviate a repetition of this inconvenience in the event of another severe winter.

I have always found the schools kept in a most satisfactory manner on all visits paid to them.

## **MEASUREMENTS.**

### **Height (Boys).**

The height of 2251 boys has been ascertained during the past year. The results are set forth in tabular form in Table I. This Table gives the average height of the children of the various schools at each age. The figures printed in red represent those

heights which are equal to or above the average of the town for this year. The Anthropometric Committee's standard is also given together with the Dunfermline average for 1909. The number of children measured at each age is given in parentheses. From this Table it will be evident that in stature the average height of the children of this town is above the Anthropometric Committee's standard, except at the ages of 6 and 11. At these ages the town average is very slightly lower. Three schools, namely, Commercial, Pittencrieff, and the High School, all exhibit a very high average, and the same condition will be observed later in regard to weight. The height of the children of Dunfermline taken as a whole has varied very little during the past four years. The average height of the children of the town compared with last year and the Anthropometric Committee's standard is shown graphically in Chart I. The red line represents the average for this year, the plain black line the average for last year (1909), while the dotted line gives the Committee's standard. The Chart is divided by horizontal lines into centimetres and inches. The figures on the left-hand side represent the former, those on the right the equivalent in inches. The vertical lines represent the various ages as set forth at the bottom of the Chart. The points at which the lines corresponding to the various averages cross the vertical lines give the average height at that particular age. It will be readily seen from this Chart how slight is the variation between the three averages, and that the children of this town have not shown any tendency to decrease in stature, but remain somewhat above the Committee's standard. In previous years at seven years of age the average for the town has been considerably below that of the Committee. This year, however, the Dunfermline average rises a little above this latter average. The other striking divergence at eight years of age is again noticeable this year as in former years, in which the town average exceeds that of the Committee. During the past year, in a similar

TABLE I.

## Boys.

## Height.

SCHOOL.	4 Years	5 Years	6 Years	7 Years	8 Years	9 Years	10 Years	11 Years	12 Years	13 Years	14 Years	15 Years	16 Years	17 Years
	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.
Dunfermline 1909 . . .	(34) 39-37	(102) 41-77	(203) 43-70	(220) 45-50	(213) 47-90	(230) 49-99	(260) 51-37	(238) 53-42	(244) 55-00	(222) 57-23	(63) 59-93	...	...	...
Dunfermline 1910 . . .	(44) 39-67	(178) 41-83	(219) 43-72	(228) 46-04	(240) 47-78	(232) 49-97	(233) 52-10	(253) 53-47	(270) 55-79	(263) 57-39	(60) 59-39	...	...	...
Commercial School . . .	(9) 39-47	(38) 42-54	(45) 44-37	(59) 46-60	(43) 47-93	(48) 50-51	(60) 52-70	(55) 53-99	(50) 56-32	(18) 57-34	(7) 59-03	...	...	...
Pittencreeff School . . .	(10) 40-95	(28) 42-44	(30) 43-80	(27) 45-75	(30) 48-15	(39) 50-64	(39) 52-01	(32) 53-95	(41) 54-84	(35) 57-21	(9) 59-41	...	...	...
M'Lean School . . .	(6) 40-66	(22) 41-10	(28) 44-00	(28) 45-53	(39) 47-76	(28) 49-49	(29) 51-60	(33) 53-49	(31) 55-69	(38) 57-22	(8) 58-06	...	...	...
Queen Anne School . . .	(1) 40-75	(25) 41-75	(21) 43-05	(23) 44-67	(29) 47-68	(27) 49-84	(29) 51-87	(25) 52-50	(37) 54-58	(27) 57-63	...	...	...	...
St. Leonard's School . . .	(3) 40-75	(22) 41-98	(31) 43-54	(26) 46-51	(40) 47-78	(34) 49-75	(27) 52-06	(25) 53-90	(30) 55-05	(31) 56-57	(4) 58-85	...	...	...
St. Margaret's School . . .	(6) 36-91	(12) 40-62	(10) 42-15	(10) 44-12	(14) 46-39	(6) 48-62	(4) 50-62	(16) 51-43	(12) 54-08	(12) 54-70	...	...	...	...
Townhill School . . .	(5) 38-95	(17) 41-27	(27) 43-19	(34) 46-13	(26) 47-79	(29) 49-01	(21) 51-95	(30) 52-86	(21) 54-50	(23) 56-41	...	...	...	...
Milesmark School . . .	(3) 38-50	(11) 41-02	(15) 43-75	(9) 46-02	(14) 47-94	(11) 49-86	(11) 51-77	(15) 53-66	(8) 54-16	(3) 54-16	...	...	...	...
High School . . . . .	(1) 42-25	(3) 42-75	(12) 44-45	(12) 48-00	(14) 49-57	(10) 51-27	(16) 52-51	(17) 54-66	(33) 56-56	(46) 59-54	(32) 60-10	(19) 63-56	(2) 63-25	(1) 65-75
Anthropometric Committee	...	41-03	44-00	45-97	47-05	49-70	51-84	53-50	54-99	56-91	59-33	62-24	64-31	66-24

Figures in Red represent the average or above the average for Dunfermline for 1910.

Figures in Black represent below the average for Dunfermline for 1910.

Figures in Parentheses represent numbers examined.

TABLE II.

## Boys.

SCHOOL.	Height.									
	Growth from 4 to 5 years	Growth from 5 to 6 years	Growth from 6 to 7 years	Growth from 7 to 8 years	Growth from 8 to 9 years	Growth from 9 to 10 years	Growth from 10 to 11 years	Growth from 11 to 12 years	Growth from 12 to 13 years	Growth from 13 to 14 years
	Ins. (25)	Ins. (100)	Ins. (155)	Ins. (164)	Ins. (169)	Ins. (215)	Ins. (204)	Ins. (183)	Ins. (160)	Ins. (21)
Dunfermline 1909 .	2.18	2.20	2.04	2.21	1.86	1.75	1.73	1.63	1.92	2.40
	(21)	(125)	(180)	(176)	(182)	(190)	(195)	(208)	(211)	(38)
Dunfermline 1910 .	2.50	2.23	2.13	2.12	2.07	1.92	1.92	1.70	1.90	2.00
	(6)	(25)	(46)	(23)	(35)	(45)	(36)	(50)	(42)	(5)
Commercial School .	2.54	2.61	2.76	2.58	2.42	2.29	2.15	2.19	2.00	1.90
	(1)	(11)	(14)	(21)	(25)	(24)	(31)	(32)	(30)	(6)
Pittencreeff School .	2.25	2.00	2.05	1.97	2.12	2.00	2.01	1.34	2.10	1.91
	(2)	(8)	(24)	(22)	(26)	(25)	(26)	(25)	(32)	(5)
M'Lean School . .	2.25	2.21	2.19	1.92	2.05	1.90	1.95	1.50	1.87	1.85
	(1)	(8)	(15)	(21)	(23)	(27)	(28)	(31)	(22)	...
Queen Anne School	2.75	2.15	1.26	1.94	1.92	1.67	1.58	1.74	1.64	(2)
	(2)	(21)	(21)	(24)	(28)	(23)	(21)	(22)	(22)	(2)
St. Leonard's School	3.12	2.07	2.00	1.97	1.84	1.81	1.75	1.78	2.19	1.75
	(5)	(8)	(8)	(12)	(4)	(4)	(14)	(9)	(11)	...
St. Margaret's School	2.70	2.31	2.32	2.16	2.31	2.06	2.07	1.97	2.09	...
	(21)	(21)	(29)	(21)	(23)	(20)	(24)	(20)	(20)	...
Townhill School .	...	2.05	2.08	2.19	1.90	2.01	1.91	1.37	1.62	...
	(3)	(14)	(7)	(14)	(9)	(10)	(13)	(4)	(3)	...
Milemark School .	2.00	2.16	1.92	2.02	2.11	1.80	1.86	1.62	1.25	...
	(1)	(9)	(6)	(8)	(9)	(12)	(12)	(15)	(30)	(20)
High School . . .	2.00	2.01	2.08	2.09	2.02	1.93	1.77	1.25	1.75	2.12

Figures in Red represent the average or above the average for Dunfermline for 1910

Figures in Black represent below the average for Dunfermline for 1910.

Figures in Parentheses represent numbers examined.



TABLE III.

## Boys.

Weight.														
SCHOOL.	4 Years	5 Years	6 Years	7 Years	8 Years	9 Years	10 Years	11 Years	12 Years	13 Years	14 Years	15 Years	16 Years	17 Years
	Lbs. (34)	Lbs. (102)	Lbs. (203)	Lbs. (220)	Lbs. (213)	Lbs. (232)	Lbs. (200)	Lbs. (233)	Lbs. (244)	Lbs. (222)	Lbs. (63)	Lbs.	Lbs.	Lbs.
Dunfermline 1909 . . .	36-55 (44)	39-76 (178)	42-80 (219)	46-46 (228)	51-43 (249)	56-05 (232)	60-17 (233)	65-40 (253)	70-43 (270)	73-36 (263)	87-22 (60)	...	...	...
Dunfermline 1910 . . .	36-42	39-08	42-01	47-07	51-05	55-75	61-19	65-90	72-28	79-59	85-44	...	...	...
	(9)	(38)	(45)	(59)	(43)	(48)	(30)	(55)	(59)	(48)	(7)	...	...	...
Commercial School . . .	35-05 (10)	39-17 (28)	43-58 (30)	47-75 (27)	51-66 (30)	57-05 (39)	61-37 (36)	67-62 (32)	74-41 (41)	78-78 (35)	84-64 (9)	...	...	...
Pittencrief School . . .	38-67 (6)	40-66 (22)	42-42 (28)	48-45 (28)	51-13 (39)	56-35 (28)	61-35 (29)	66-44 (33)	69-95 (31)	77-85 (38)	83-77 (8)	...	...	...
M'Lean School . . . .	36-12 (1)	38-07 (25)	43-09 (21)	45-58 (23)	50-23 (29)	53-66 (27)	60-44 (29)	66-11 (30)	71-69 (37)	77-69 (27)	79-21 (3)	...	...	...
Queen Anne School . .	36-00 (3)	39-57 (22)	40-98 (31)	45-30 (26)	51-38 (40)	56-14 (34)	61-81 (27)	63-43 (25)	70-45 (30)	82-44 (31)	...	...	...	...
St. Leonard's School . .	36-25 (6)	39-73 (12)	39-48 (10)	47-33 (10)	51-50 (14)	55-34 (6)	61-32 (4)	66-01 (16)	69-90 (12)	75-30 (12)	72-43 (3)	...	...	...
St. Margaret's School . .	34-00 (5)	38-10 (17)	39-72 (27)	43-70 (34)	49-46 (26)	53-83 (22)	60-31 (21)	61-09 (30)	68-75 (21)	72-56 (23)	...	...	...	...
Townhill School . . . .	35-80 (3)	38-03 (11)	41-43 (15)	46-66 (9)	50-34 (14)	53-90 (11)	61-02 (11)	64-60 (15)	69-95 (8)	76-35 (3)	...	...	...	...
Milesmark School . . .	34-41 (1)	37-50 (3)	42-33 (12)	47-02 (12)	51-64 (14)	56-66 (10)	60-02 (16)	67-11 (17)	70-53 (33)	71-75 (46)	...	...	...	...
	(1)	(3)	(12)	(12)	(14)	(10)	(16)	(17)	(33)	(46)	(32)	(19)	(2)	(1)
High School . . . . .	40-50	37-91	43-72	50-43	52-14	58-85	61-43	68-85	74-91	88-54	89-26	106-13	116-12	102-00

Figures in Red represent the average or above the average for Dunfermline for 1910.

Figures in Black represent below the average for Dunfermline for 1910.

Figures in Parentheses represent numbers examined.

TABLE IV.

## Boys.

SCHOOL.	Weight.									
	Increase from 4 to 5 years	Increase from 5 to 6 years	Increase from 6 to 7 years	Increase from 7 to 8 years	Increase from 8 to 9 years	Increase from 9 to 10 years	Increase from 10 to 11 years	Increase from 11 to 12 years	Increase from 12 to 13 years	Increase from 13 to 14 years
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Dunfermline 1909 .	(25) 3-01	(100) 4-27	(155) 3-98	(164) 4-16	(199) 4-83	(215) 4-94	(204) 5-08	(189) 5-73	(160) 7-06	(21) 10-04
Dunfermline 1910 .	(21) 3-09	(125) 3-41	(180) 3-76	(176) 4-01	(182) 4-58	(190) 4-74	(195) 5-03	(208) 5-61	(211) 6-95	(38) 7-00
Commercial School .	(6) 2-91	(25) 4-01	(46) 4-58	(38) 4-77	(35) 5-70	(45) 5-48	(20) 6-25	(50) 7-80	(42) 6-75	(5) 5-50
Pittencreeff School .	(1) 3-50	(11) 4-70	(14) 4-71	(21) 4-30	(25) 4-35	(24) 5-67	(31) 5-19	(32) 6-15	(30) 7-37	(6) 8-33
M'Lean School . .	(2) 3-12	(8) 3-69	(24) 3-90	(22) 3-50	(36) 3-95	(25) 4-50	(26) 4-79	(25) 5-00	(32) 6-50	(5) 5-75
Queen Anne School	(1) 3-50	(8) 3-06	(15) 2-14	(21) 3-42	(23) 3-47	(27) 4-31	(28) 4-38	(31) 5-12	(22) 7-71	...
St. Leonard's School	(2) 3-37	(21) 3-60	(21) 3-91	(24) 3-68	(28) 4-51	(23) 4-07	(21) 5-16	(22) 5-07	(22) 6-35	(2) 7-50
St. Margaret's School	(3) 3-50	(8) 3-43	(8) 4-06	(12) 4-41	(4) 3-87	(4) 5-37	(11) 5-21	(9) 4-58	(11) 7-13	...
Townhill School .	... (3)	(21) 2-42	(20) 3-33	(21) 4-02	(23) 3-40	(20) 3-95	(24) 4-39	(20) 4-67	(20) 5-50	...
Milesmark School .	(3) 2-16	(14) 2-89	(7) 3-92	(14) 4-37	(9) 5-25	(10) 4-20	(13) 4-92	(4) 5-75	(2) 3-08	...
High School . . .	(1) 3-50	(9) 2-91	(6) 3-16	(8) 4-15	(9) 3-91	(12) 4-45	(12) 4-93	(15) 5-12	(30) 5-25	(20) 7-25

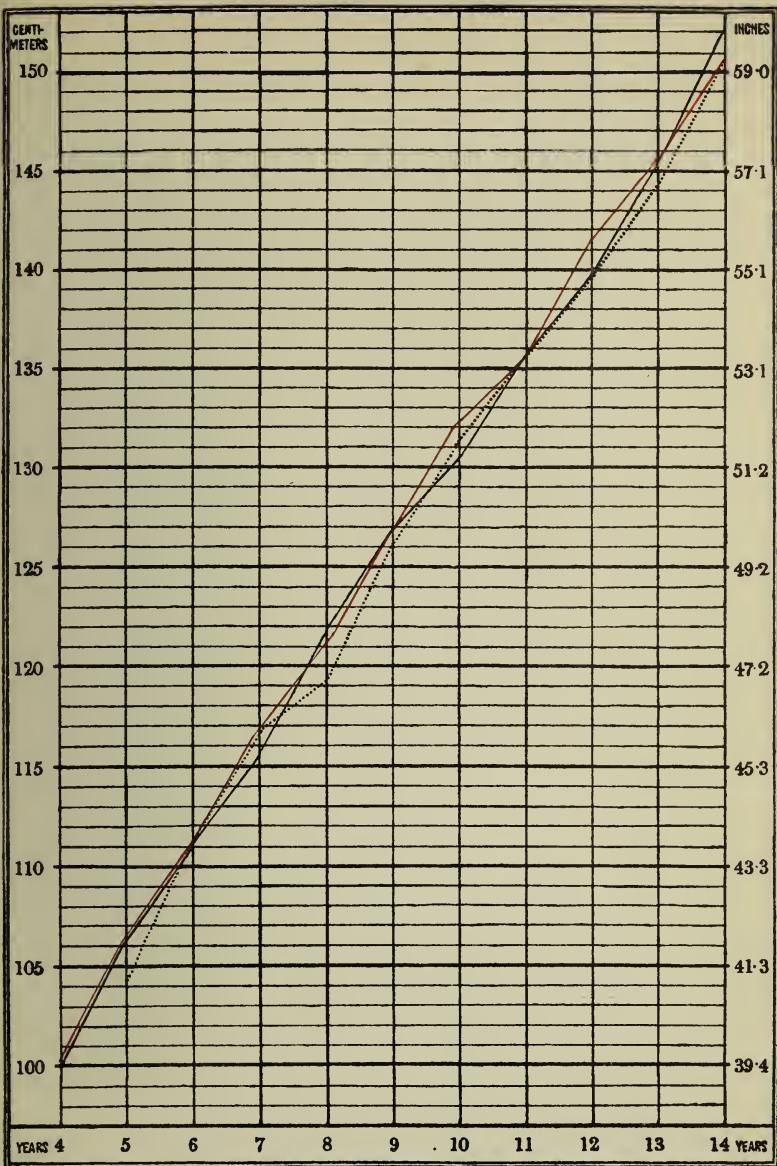
Figures in Red represent the average or above the average for Dunfermline for 1910.

Figures in Black represent below the average for Dunfermline for 1910.

Figures in Parentheses represent numbers examined.

CHART I.

## Average Height—Boys.

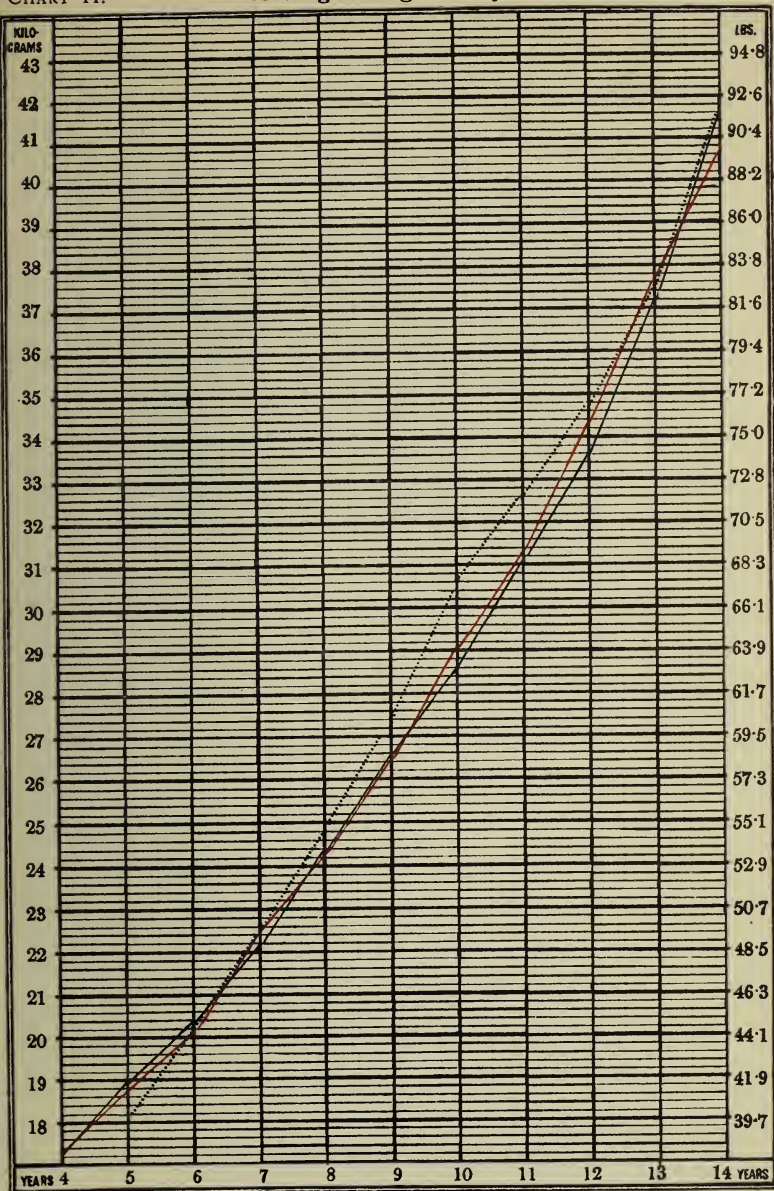


..... Indicates Anthropometric Committee's Standard which is the average for Boys in Britain.  
 ——— Indicates Average for Dunfermline Boys. 1909.  
 ——— Indicates Average for Dunfermline Boys, 1910.



CHART II.

## Average Weight—Boys.



..... Indicates Anthropometric Committee's Standard for Boys.

— Indicates Average for Dunfermline Boys, 1909.

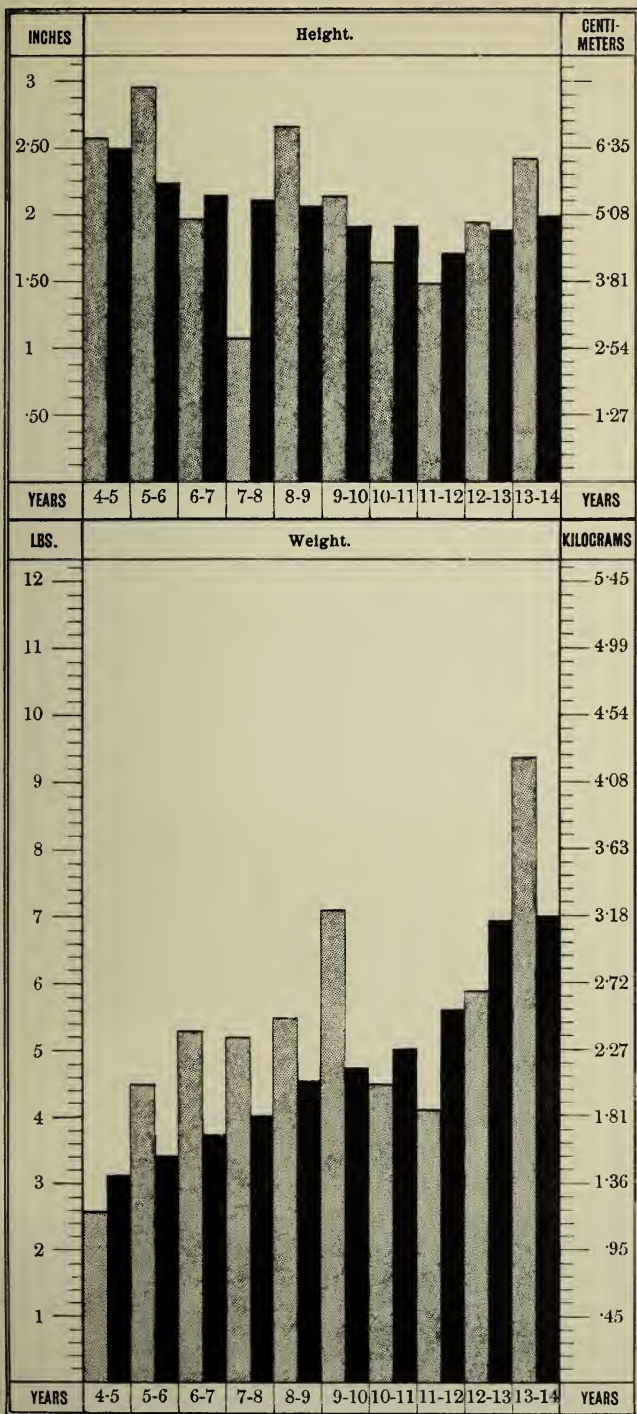
— Indicates Average for Dunfermline Boys, 1910.





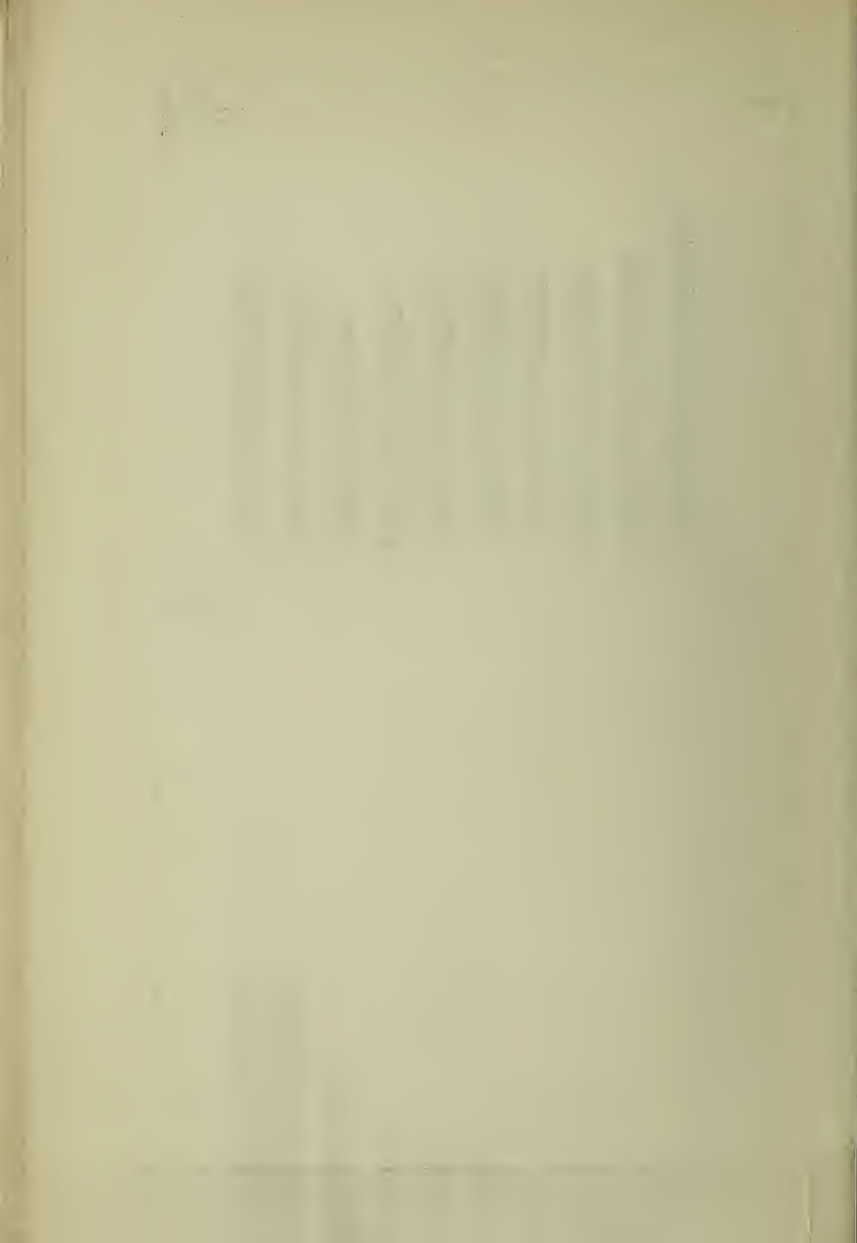
DIAGRAM I.

Boys



▨ Increase taken from Anthropometric Committee's Standard.

■ Increase of Dunfermline Boys at each age.





manner as last year, the growth of the children from last year to this year has been ascertained. This increase has been obtained from those boys who have been actually measured in both years at the same period of the year. The averages obtained for the town and the various schools are set forth in Table II. The figures are coloured in precisely the same way as in Table I., and the average yearly increase in the height of the boys of the town for the previous year is also given. There is very slight variation between the two years for the town. Attention is particularly drawn to the figures of St. Margaret's School and the High School. These results should be compared with Table I. As this condition exists in respect to the increase in weight, the fact is somewhat striking, and reference will be made again to it in considering the weight of the children. This form of measurement has not been carried out over a sufficient number of years to warrant any deduction being drawn, but it would certainly appear that the average growth in height of the children is satisfactory.

### **Weight (Boys).**

2251 boys have been weighed, and the results are shown in Table III., which gives the average weight of the children of the various schools in the town at each age. The averages of last year are also given. The same indication is made as to whether any individual average is equal to or exceeds that of the average of the town for this year. It will be evident that the schools previously mentioned, viz.:—Commercial, Pittencrieff, and the High School are generally above the average for the town. In addition, Queen Anne and St. Leonard's Schools also show a considerable number of ages which exceed this average. St. Margaret's School continues below the average. On Chart II. is graphically represented the average weights at ages from 4-14 in a similar manner to that on Chart I. The numbers on the left correspond to kilograms,

those on the right to the equivalent number of pounds. The average for Dunfermline for the past two years remains very much the same at all ages, and continues below that obtained by the Anthropometric Committee. Improvement is, however, noticeable this year at 12 and 13 years of age, when the Dunfermline average at the former age closely approximates, and at 13 years is somewhat above, the standard. It would be impossible to make any definite statement with regard to either the height or weight, observations not having been carried out over a sufficient number of years, but it would appear from the averages obtained during the past four years that the tendency of the children is to be slightly lighter in weight, while their height is the same as that obtained for the standard for Great Britain. In previous years reference has been made to this fact, and at the present time there seems nothing to controvert it. Reference will be made under nutrition to various factors which tend to diminish the growth of the tissues and the bodily weight.

Table IV. gives the increase in weight of those boys examined this year and last year. The whole Table is arranged on a similar plan to that showing the increase in height. It will be observed as a striking feature that St. Margaret's School and the High School change places with respect to being above and below the average for the town. The former exceeds the average growth obtained for Dunfermline, while the latter falls below it at nearly every age. This has been referred to as occurring in the measurements for height. Last year a very similar condition was observed in the case of Queen Anne School. It is undoubtedly a very striking feature, as the two schools draw children from totally different sources. It would appear as if, during the actively growing period of school life, there existed a tendency on the part of nature to make up for deficiency existing before that period. Children starting in the younger ages at a lower standard tend to increase, both in height and

weight, to a greater degree than those commencing with a higher standard of bodily growth. This fact seems to emphasise the necessity of looking after the children of the nation, where necessary, at the earliest possible age, and not delaying until school age is reached. The period from birth to school age cannot be neglected if a high standard of physical condition is to be maintained. Medical Inspection too often reveals defects when the child enters school which could have been prevented had proper measures been taken early enough in the child's life. This question, which involves the welfare of the child at a very susceptible age, will, I feel convinced, demand attention in the near future. At the present time it is possible to do much to guard the life of infants by the employment of Health Visitors. Skilled nurses employed in this work have proved of the utmost value in preventing infant mortality, and may be regarded as an absolute necessity at the present time to any community. From the age when infants cease to be under the care of Health Visitors to the age when they enter school no power of supervision has as yet been devised. I am as much convinced that such is necessary as I am convinced that means will be found in the future for securing adequate care of children at this very important period of life. In reviewing the heights and weights of the children attending the various schools, it is evident that the schools exhibiting the higher averages draw their attendances mainly from homes in which the parents earn satisfactory incomes. It must be taken as an undisputed fact that the better the home conditions the healthier and more robust will be the children. The home conditions, which may be taken to include the feeding of the children, depend mainly on the income of the parents. There are exceptions, but these are few in number. It is a social problem of great magnitude, and it is one which is very prominently brought before the notice of the School Medical Officer. Little can be done by these officials in their capacity as such,

except in regard to the recommendation of feeding of necessitous children. It is, however, necessary to call attention to the fact.

### **Height (Girls).**

Chart III. shows the average height of 2203 girls at the ages from 4 to 14 compared with the average of last year and the Anthropometric Committee's standard. There is very little difference to be observed in these averages, all of which are closely alike. The height at ten years of age, which fell last year below the standard, is once again above it. On Table V. is set out the average height of the girls of the town for the past two years and of the various schools. There is a striking similarity in these figures as compared with those of the boys in regard to the high averages of certain schools. The increase in height of the girls examined this year and last year is given in Table VI., and exhibits the same characteristics with regard to the increase of the children of St. Margaret's and High Schools. On the whole, the height of the girls of the town, as compared with previous years, remains very much the same and, compared with the Anthropometric Committee's standard, may be considered satisfactory.

### **Weight (Girls).**

In Chart IV. is given the average weight of girls in a similar manner to that of the boys. The averages obtained are either equal to or just above those obtained for last year, except at eleven and fourteen years, at which ages they fall slightly below. Compared with the Anthropometric Committee's standard, the averages, as in the case of the boys, are somewhat less, though to a lesser extent. Table VII. gives the average weight of the girls of the various schools.

In Table VIII. is shown the increase in weight. In both Tables the results as regards individual schools are very much the same as has been observed in the

TABLE V.

## Girls.

SCHOOL.	Height.										16 Years	17 Years
	4 Years	5 Years	6 Years	7 Years	8 Years	9 Years	10 Years	11 Years	12 Years	13 Years	14 Years	15 Years
Dunfermline 1909 . . .	Ins. (26)	Ins. (156)	Ins. (224)	Ins. (239)	Ins. (223)	Ins. (225)	Ins. (244)	Ins. (211)	Ins. (208)	Ins. (207)	Ins. (42)	Ins. (27)
	40-33	41-53	43-70	45-59	47-41	49-03	50-76	53-23	55-29	57-41	60-82	61-10
Dunfermline 1910 . . .	(18)	(172)	(236)	(235)	(252)	(243)	(233)	(202)	(208)	(231)	(72)	
	40-59	41-45	43-33	45-84	47-48	49-79	51-41	53-09	55-94	58-31	59-83	...
Commercial School . . .	(11)	(34)	(42)	(53)	(53)	(47)	(44)	(53)	(43)	(41)	(12)	...
	42-20	41-85	43-56	46-50	48-11	49-73	52-03	53-47	57-92	58-50	59-39	...
Pittenerieff School . . .	...	(19)	(37)	(37)	(29)	(46)	(35)	(33)	(26)	(33)	(5)	...
		41-59	43-76	46-01	47-61	49-71	51-61	53-47	55-57	59-43	59-40	...
M'Lean School . . . .	...	(26)	(37)	(36)	(32)	(33)	(27)	(31)	(27)	(25)	(4)	...
		42-47	44-08	45-43	47-46	49-58	51-19	53-37	55-80	57-31	56-43	...
Queen Anne School . .	(1)	(17)	(23)	(27)	(32)	(37)	(29)	(20)	(28)	(38)	...	...
	37-00	41-05	42-36	45-86	47-82	48-87	49-79	52-56	54-92	56-50	...	...
St. Leonard's School .	(2)	(14)	(32)	(35)	(32)	(33)	(21)	(37)	(22)	(23)	(5)	...
	39-25	41-57	43-29	45-57	46-97	49-31	51-52	53-61	54-75	58-72	57-75	...
St. Margaret's School .	(4)	(9)	(11)	(13)	(18)	(9)	(16)	(18)	(10)	(10)	(4)	...
	37-75	40-08	41-81	45-88	46-11	48-12	49-60	52-05	53-22	55-82	59-18	...
Townhill School . . . .	..	(34)	(32)	(29)	(31)	(26)	(33)	(20)	(34)	(13)	(2)	...
		40-94	42-71	44-98	46-76	47-93	50-53	51-96	54-81	57-95	59-75	...
Milesmark School . . .	..	(14)	(14)	(17)	(12)	(16)	(12)	(23)	(8)	(3)	...	...
		40-83	42-80	46-05	47-33	49-15	50-93	53-07	56-15	57-58	...	...
High School . . . . .	..	(5)	(8)	(8)	(13)	(7)	(16)	(10)	(15)	(52)	(41)	(16)
		41-55	45-09	46-25	48-75	50-64	52-23	52-95	57-66	59-31	60-66	61-93
Anthropometric Committee	..	40-55	42-88	44-45	46-60	48-73	51-05	53-10	55-66	57-77	59-80	61-75

Figures in Red represent the average or above the average for Dunfermline for 1910.

Figures in Black represent below the average for Dunfermline for 1910.

Figures in Parentheses represent numbers examined.

TABLE VI.

## Girls.

SCHOOL.	Height.									
	Growth from 4 to 5 years	Growth from 5 to 6 years	Growth from 6 to 7 years	Growth from 7 to 8 years	Growth from 8 to 9 years	Growth from 9 to 10 years	Growth from 10 to 11 years	Growth from 11 to 12 years	Growth from 12 to 13 years	Growth from 13 to 14 years
	Ins. (19)	Ins. (97)	Ins. (155)	Ins. (163)	Ins. (167)	Ins. (201)	Ins. (172)	Ins. (161)	Ins. (151)	Ins. (7)
Dunfermline 1909 .	2.25	2.15	2.14	1.93	1.82	1.79	1.92	2.29	2.28	1.58
Dunfermline 1910 .	(18)	(121)	(189)	(194)	(186)	(187)	(211)	(159)	(156)	(44)
	2.33	2.23	2.16	2.18	2.08	2.03	2.15	2.42	2.40	2.23
Commercial School .	(2)	(16)	(35)	(38)	(31)	(31)	(46)	(34)	(21)	(7)
	2.75	2.39	2.63	2.51	2.24	2.33	2.29	2.96	2.96	2.46
Pittencreeff School .	...	(9)	(27)	(16)	(32)	(24)	(38)	(16)	(22)	(5)
	...	2.16	1.98	1.92	2.00	2.07	2.33	2.43	2.50	2.70
M'Lean School . .	(7)	(26)	(38)	(36)	(27)	(24)	(27)	(21)	(18)	(2)
	2.75	2.61	2.57	2.57	2.59	2.26	2.40	2.48	2.68	2.12
Queen Anne School	...	(9)	(18)	(24)	(23)	(26)	(24)	(26)	(25)	...
	...	2.25	2.05	2.11	1.96	1.84	1.96	2.08	2.11	...
St. Leonard's School	(1)	(18)	(26)	(23)	(25)	(16)	(25)	(16)	(14)	(5)
	1.75	2.06	1.83	1.97	1.85	1.92	1.94	2.07	2.51	2.40
St. Margaret's School	(1)	(5)	(10)	(17)	(7)	(14)	(9)	(3)	(8)	(2)
	2.00	2.50	2.65	2.54	2.28	2.12	2.44	2.62	2.87	2.62
Townhill School .	(6)	(23)	(27)	(29)	(23)	(28)	(23)	(20)	(17)	(2)
	1.91	1.84	1.75	1.80	1.89	1.91	1.95	2.20	2.63	2.00
Milesmark School .	(1)	(10)	(12)	(10)	(14)	(12)	(23)	(7)	(3)	...
	2.00	2.27	2.00	1.87	1.94	1.81	2.11	2.57	2.66	...
High School . . .	...	(5)	(6)	(11)	(4)	(12)	(6)	(11)	(18)	(21)
	...	1.85	1.45	1.81	1.56	1.60	1.58	2.15	1.91	2.01

Figures in Red represent the average or above the average for Dunfermline for 1910.

Figures in Black represent below the average for Dunfermline for 1910.

Figures in Parentheses represent numbers examined.

TABLE VII.

## Girls.

SCHOOL.	Weight.													
	4 Years	5 Years	6 Years	7 Years	8 Years	9 Years	10 Years	11 Years	12 Years	13 Years	14 Years	15 Years	16 Years	17 Years
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Dunfermline 1909 . . .	(26) 38-06	(156) 39-90	(224) 43-42	(229) 46-75	(223) 50-77	(225) 55-15	(244) 60-03	(211) 67-66	(208) 74-35	(207) 82-17	(42) 97-88	(27) 105-14	...	...
Dunfermline 1910 . . .	(13) 36-75	(172) 39-09	(236) 42-64	(255) 47-77	(252) 51-39	(243) 55-03	(233) 59-56	(202) 65-78	(209) 75-31	(231) 85-95	(73) 94-62	..	...	...
Commercial School . . .	(11) 38-88	(34) 40-5	(42) 42-95	(53) 50-02	(53) 53-66	(47) 56-51	(44) 62-26	(53) 66-31	(48) 79-42	(41) 82-48	(12) 90-70	...	...	..
Pittencrieff School . . .	...	(19) 38-53	(37) 43-90	(37) 47-81	(29) 50-93	(46) 55-84	(35) 60-99	(33) 66-46	(36) 74-46	(33) 90-93	(5) 91-90	...	...	...
M'Lean School . . .	(1) 29-50	(17) 41-00	(23) 43-56	(27) 46-22	(32) 50-49	(33) 55-25	(27) 57-63	(31) 66-72	(27) 76-45	(25) 81-95	(4) 81-12	...	...	...
Queen Anne School . . .	(2) 35-62	(14) 39-54	(32) 41-22	(35) 49-53	(32) 51-94	(27) 55-12	(29) 56-95	(26) 63-74	(28) 72-23	(23) 78-72	(5) 83-75	...	...	...
St. Leonard's School . . .	(4) 33-22	(9) 36-41	(11) 39-38	(13) 46-52	(18) 49-08	(8) 52-12	(16) 54-64	(18) 64-51	(10) 71-60	(23) 82-35	(3) 90-31	...	...	...
St. Margaret's School . . .	...	(34) 37-88	(25) 42-43	(29) 45-99	(31) 50-52	(26) 53-18	(33) 58-93	(26) 62-70	(24) 72-50	(19) 85-09	(2) 91-25	...	...	...
Townhill School . . .	...	(14) 37-21	(14) 41-55	(17) 47-70	(12) 50-83	(16) 54-29	(12) 60-97	(23) 66-23	(8) 77-46	(3) 78-33	..	...	...	...
Milemark School . . .	...	(5) 36-45	(8) 44-84	(3) 47-59	(13) 53-21	(7) 57-96	(16) 64-90	(10) 65-72	(15) 82-63	(52) 94-24	(41) 99-40	(16) 101-17	(4) 111-06	..
High School . . . . .	...	39-2	41-7	47-5	52-1	55-5	62-0	68-1	76-4	87-2	96-7	106-3	113-1	...
Anthropometric Committee	36-1													

Figures in Red represent the average or above the average for Dunfermline for 1910.

Figures in Black represent below the average for Dunfermline for 1910.

Figures in Parentheses represent numbers examined.



TABLE VIII.

## Girls.

SCHOOL.	Weight.									
	Increase from 4 to 5 years	Increase from 5 to 6 years	Increase from 6 to 7 years	Increase from 7 to 8 years	Increase from 8 to 9 years	Increase from 9 to 10 years	Increase from 10 to 11 years	Increase from 11 to 12 years	Increase from 12 to 13 years	Increase from 13 to 14 years
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Dunfermline 1909 .	(19) 3·05	(97) 3·96	(155) 4·32	(163) 4·67	(167) 4·69	(201) 4·75	(172) 5·72	(161) 8·16	(151) 10·28	(7) 12·14
Dunfermline 1910 .	(18) 3·77	(121) 3·76	(189) 4·32	(194) 4·40	(189) 4·42	(187) 4·73	(211) 5·66	(159) 7·85	(156) 9·68	(44) 10·54
Commercial School .	(2) 5·75	(16) 4·34	(35) 5·57	(38) 5·76	(31) 4·79	(31) 5·26	(46) 6·06	(34) 9·05	(21) 11·43	(7) 9·25
Pittencrieff School .	...	(9) 4·05	(27) 4·16	(16) 5·00	(32) 4·57	(24) 4·72	(28) 6·36	(16) 8·25	(22) 10·36	(5) 12·45
M'Lean School . .	(7) 3·78	(26) 3·75	(28) 4·19	(26) 4·36	(27) 4·95	(24) 4·90	(27) 5·50	(21) 9·88	(18) 10·65	(2) 7·12
Queen Anne School	...	(9) 3·36	(18) 4·94	(24) 3·60	(23) 4·28	(26) 4·06	(24) 5·07	(26) 6·74	(25) 7·48	...
St. Leonard's School	(1) 3·25	(18) 3·59	(26) 2·01	(23) 3·93	(25) 4·08	(16) 4·54	(25) 5·45	(16) 6·45	(14) 9·01	(5) 9·30
St. Margaret's School	(1) 5·00	(5) 2·15	(10) 4·47	(17) 4·97	(7) 5·50	(14) 4·58	(9) 6·50	(8) 6·50	(8) 12·81	(2) 15·25
Townhill School .	(6) 3·29	(23) 3·25	(27) 3·42	(26) 3·57	(24) 3·98	(28) 4·44	(24) 4·95	(26) 6·15	(17) 10·33	(2) 12·50
Milesmark School .	(1) 2·25	(10) 3·17	(12) 3·79	(10) 3·92	(14) 3·37	(12) 5·45	(22) 5·75	(7) 8·14	(3) 7·16	...
High School . . .	...	(5) 4·75	(6) 3·29	(11) 3·40	(4) 3·93	(12) 4·85	(6) 5·41	(11) 8·15	(18) 10·65	(21) 10·51

Figures in Red represent the average or above the average for Dunfermline for 1910.

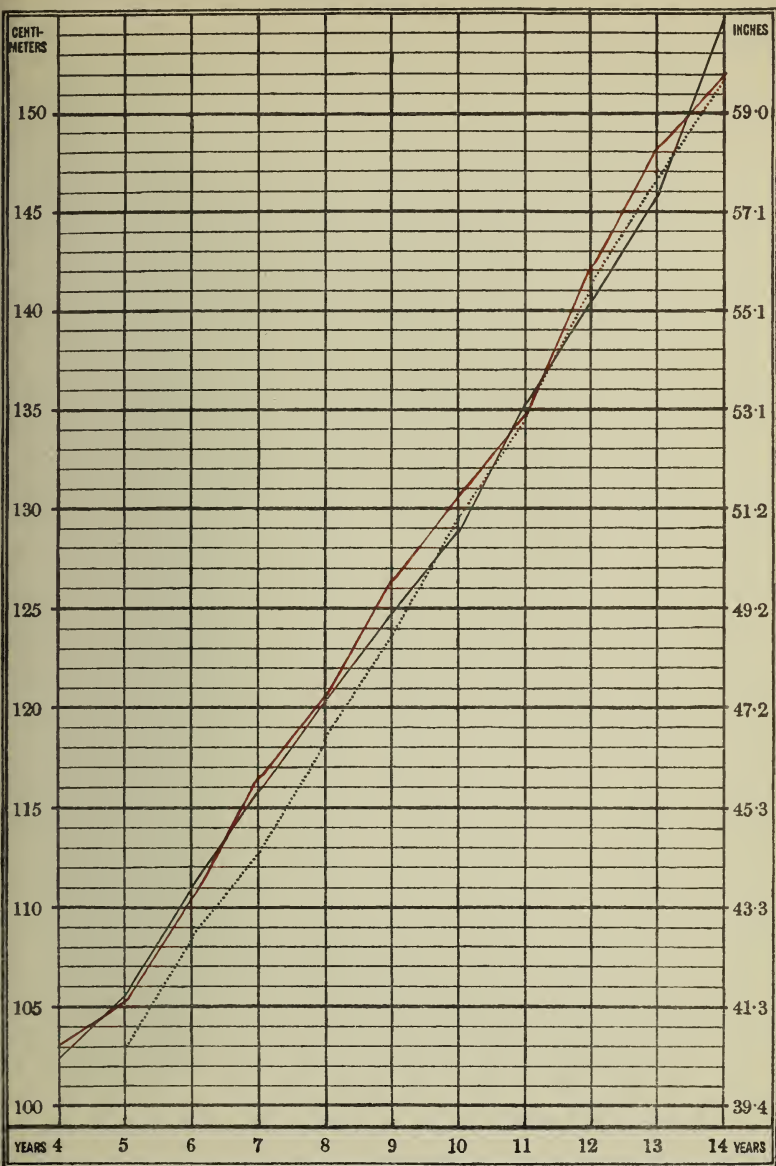
Figures in Black represent below the average for Dunfermline for 1910.

Figures in Parentheses represent numbers examined.



CHART III.

## Average Height.—Girls.



..... Indicates Anthropometric Committee's Standard which is the average for Girls in Britain.

— Indicates Average for Dunfermline Girls. 1909.

— Indicates Average for Dunfermline Girls. 1910.

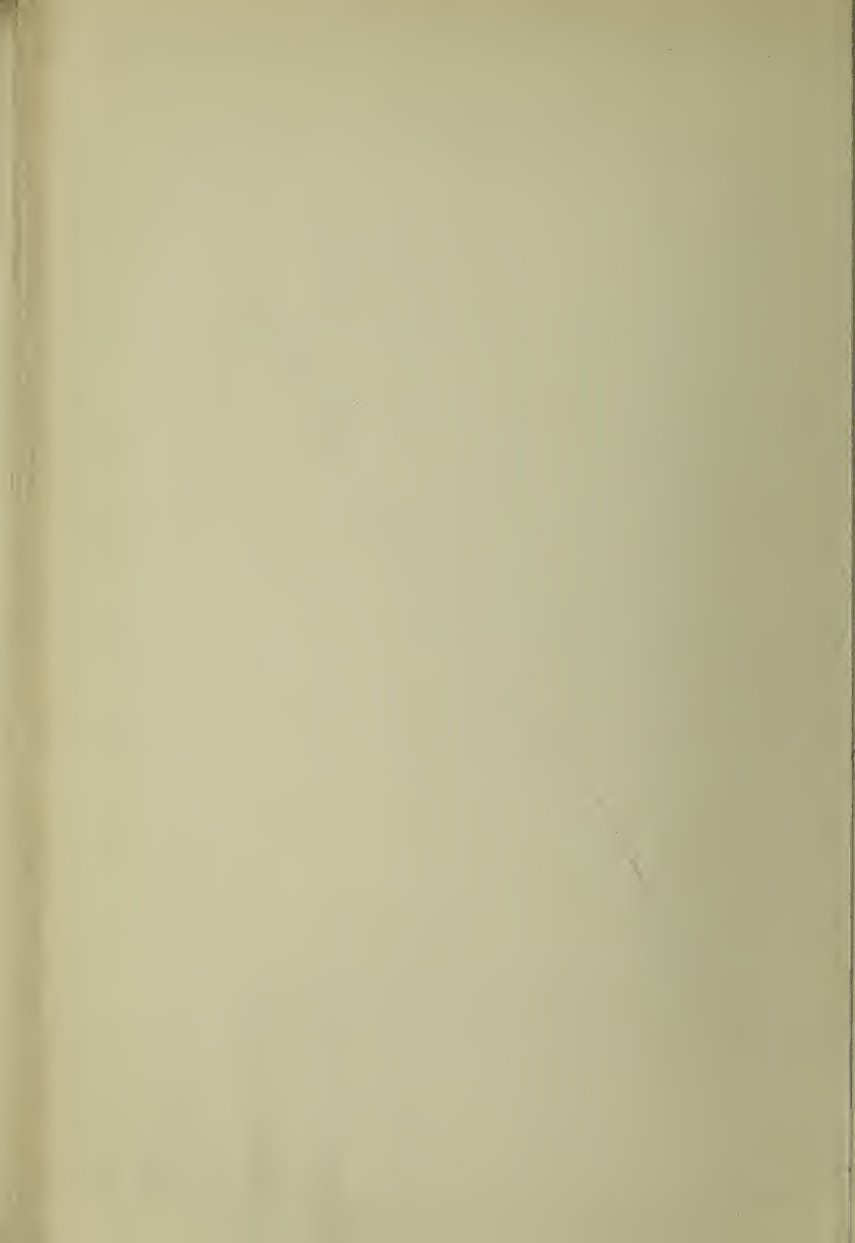
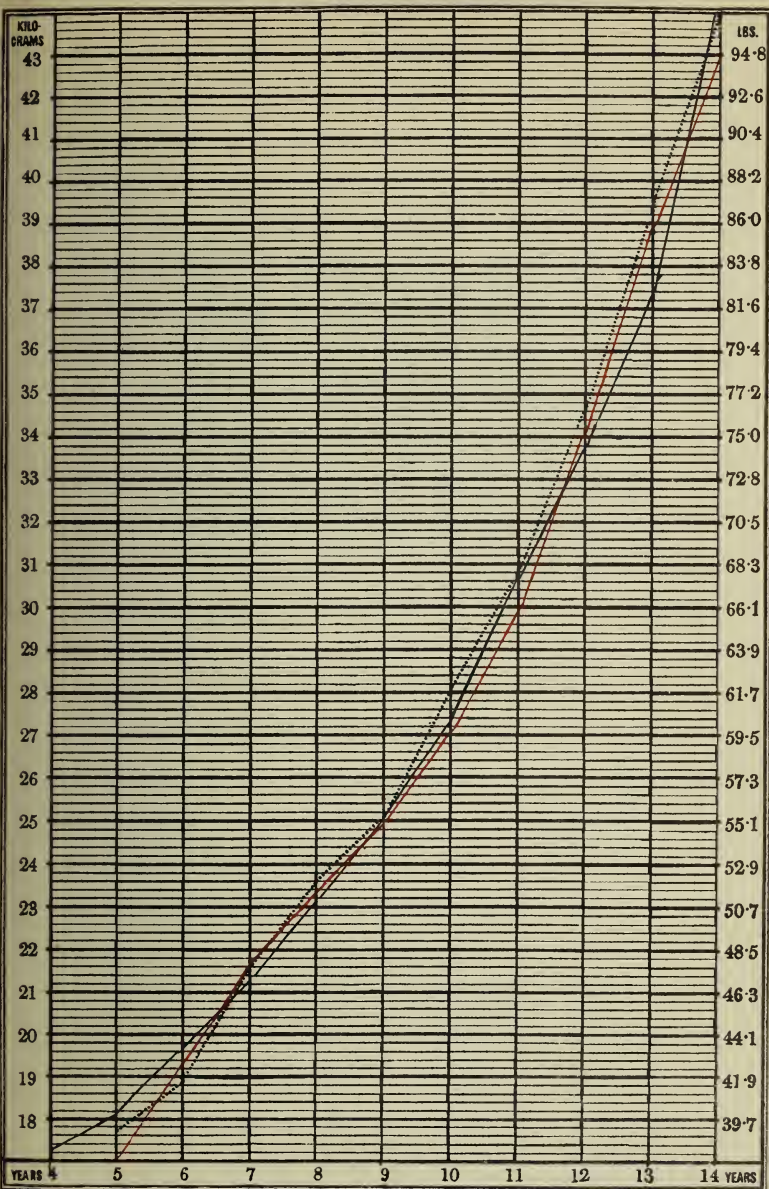


CHART IV.

## Average Weight—Girls.



..... Indicates Antropometric Committee's Standard for Girls.

— Indicates Average for Dunfermline Girls. 1909.

— Indicates Average for Dunfermline Girls. 1910.

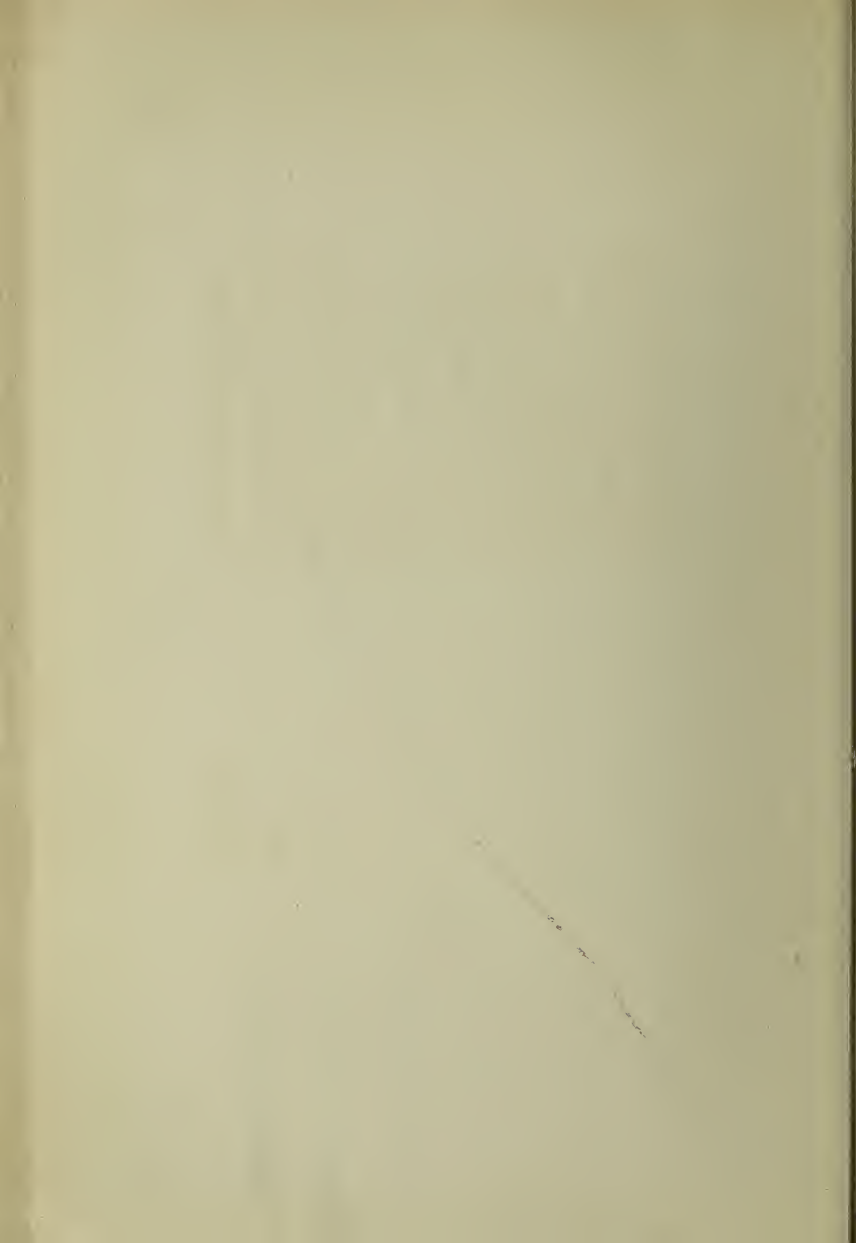
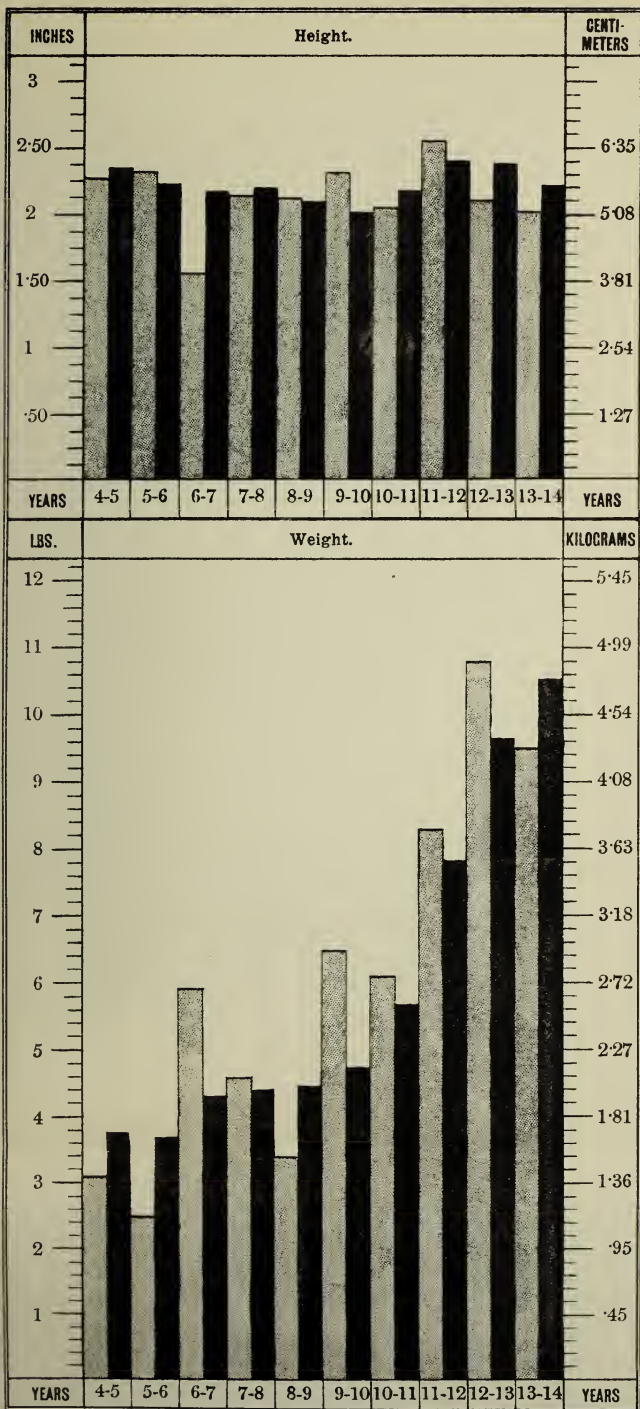


DIAGRAM II.

Girls.



Stippled Increase taken from Anthropometric Committee's Standard.

Black Increase of Dunfermline Girls at each age.



case of the boys, and the opinion offered in respect of the latter applies equally in the case of the girls.

### **Chest Expansion.**

The chest measurements of 1530 boys have been taken this year. The minimum, normal, and maximum chest expansion have been recorded. These measurements have been taken each year in precisely the same way. I cannot agree with some who consider that they can be taken with any degree of accuracy by merely loosening the clothes. In any case, accuracy is extremely difficult to obtain, and would necessitate a considerable time being spent on these measurements which, when obtained, have little significance on the capacity or the condition of the lungs. The taking of these measurements undoubtedly interests the children, and as such is valuable in maintaining their interest in the Medical Inspection. One medical officer considers them of value in teaching correct breathing. With this to some extent I agree, but, at the same time, if this is the only value to be obtained from them, the time so spent could, I think, be more profitably employed by giving a more efficient breathing lesson in another way. The measurements obtained from year to year show very little variation one from another, but it is too early to discard them at present as being of little value. In each year the difference between the minimum and maximum expansion has shown a gradual but steady increase from one age to another. On the whole, the average expansions this year fall somewhat below that obtained in former years. This may possibly be accounted for by the fact that the Secondary School was not measured in this way this year. It will be of interest to observe whether the average next year, when these measurements will again be taken, is increased. There is no doubt that until the higher ages are reached there is very great difficulty in making the children perform the requisite movements correctly.



Children with deformity of the chest, particularly the so-called pigeon chest, certainly exhibit a limited chest expansion. It has appeared also as if those children with heart disease have diminished chest expansion. No definite figures have been obtained, so that a conclusion has not been arrived at. This may present a point of interest to be considered in the future and as such it is suggested.

Table IX. gives in figures the average chest expansion for the last two years.

TABLE IX.

Age	1909		1910	
	Number	Expansion	Number	Expansion
	Examined	Inches	Examined	Inches
7	85	1.86	50	1.94
8	183	2.11	170	2.14
9	239	2.41	211	2.26
10	258	2.63	214	2.55
11	236	2.92	236	2.59
12	244	3.05	238	2.93
13	222	3.27	212	3.09
14	63	3.34	28	3.35

### NUTRITION.

The nutrition of the children must to some extent be considered in connection with the records of their weight. Each year has shown that the children of this town fall somewhat below the general standard. From observations made during the past four years little difference has been observed this year as compared with former years. In previous Reports reference has been made to those conditions which may be considered as influencing the nutrition of the children. Last year I referred to the lack of sleep which in many cases apparently contributes to a low standard of nutrition. It was stated that influence might be



brought to bear upon the parents to see that the proper allowance of sleep was not curtailed. The examination this year has not altered the opinion expressed at that time. A further factor which interferes with the nutrition of the children is the work done by school children out of school hours. A considerable number of them are attached to various businesses and shops as messengers. This work, although not arduous, is, as a rule, sufficient to produce fatigue in children after a day's work in school. In some instances the wage is a consideration to the weekly income of the parents, and it is in such cases that the food supplied is likely to be reduced in quantity and quality. Two forces, therefore, under these circumstances, tend to reduce the nutrition of the child's body—increased fatigue and diminished food supply. Those parents, to whom the wage is of little or no urgent necessity, would be well advised to forego this addition to the family income in the interests of their children's health.

It is universally held that the middle of the day is the time for the principal meal of a child. In an ordinary household it is economical and usually most convenient to have the principal meal for all the members of that household at the same hour. Under the existing circumstances for parents with children in the Infant and Senior Departments of the Schools and possibly the wage earner at work in the factories, such an arrangement is out of the question. The smaller children may have from 12.30 to 1.30, the elder children from 1 to 2, and the father from 2 to 3. If the children of one family do not all attend the same school, then the difference in school hours increases the difficulty and makes a set meal almost impossible. For children in the schools, an hour to go home, have their meals and return to school, is too short to allow of proper time being given to the meal. If, in addition, the children, as many of them do, live at some considerable distance from the school, the interval is still further reduced. This may to some extent

explain the frequent picture that one sees of children taking part of their meal on their way to school. Locomotion and digestion, unfortunately, do not agree well together, the latter being the process to suffer. It would, I think, be desirable to lengthen the period in the middle of the day, making the hours correspond in all the schools throughout the Burgh, namely, from 12.30 to 2. If absolutely necessary for educational purposes, morning school could commence at 9 A.M. for the seniors and 9.15 A.M. for the infants. If it were possible for the industries to fall in with this time for the mid-day meal, I am convinced the parents, if not to their own convenience, in the interests and welfare of their children would be willing to adopt the change, if the reasons for it were explained to them.

It is unnecessary to lay further stress on the part played by the teeth in the process of digestion. Sufficient emphasis has in former years been placed on this point. Not only do decaying teeth interfere with mastication and digestion, but the absorption of harmful products into the body as a result of decaying teeth also very injuriously affects the nutrition and health of the children.

Tables X. and XI. give the percentage of children examined for the first time with good, medium and bad nutrition at each age. Tables XII. and XIII. give the conditions as regards nutrition at the four special periods. It will be seen that for both boys and girls, the highest percentage of children with bad nutrition is at the period of their entering the Senior Department. This is usually a very trying time in the child's school life, and there is every reason to expect that this should affect the physical condition of the children. Taking these four periods together the condition shows very little variation from that obtained last year, and cannot, I think, be regarded as altogether satisfactory. The girls show, as in former years, advantage over the boys, and this fact is borne out when the weights of the two sexes are compared.

TABLE X.

**Nutrition (Boys).**

Age	Number Examined	Good, above average. Percentage	Medium, average. Percentage	Bad, below average. Percentage
4	41	48.78	43.90	7.31
5	149	38.93	56.36	4.69
6	89	34.83	52.80	12.35
7	43	46.51	41.86	11.62
8	56	37.50	55.35	7.14
9	30	23.33	63.33	13.33
10	25	32.00	60.00	8.00
11	23	65.21	34.78	...
12	53	50.94	41.50	7.54
13	45	68.88	15.55	15.55
14	15	40.00	53.33	6.66
Over 14	3	100.00	...	...
	<hr/> 572	<hr/> 43.18	<hr/> 48.42	<hr/> 8.39

TABLE XI.

**Nutrition (Girls).**

Age	Number Examined	Good, above average. Percentage	Medium, average. Percentage	Bad, below average. Percentage
4	32	3.12	87.50	9.37
5	142	19.72	74.64	5.62
6	113	17.69	74.33	7.96
7	58	39.67	53.44	6.87
8	27	48.14	51.85	...
9	12	50.00	41.66	8.33
10	18	72.22	22.22	5.55
11	25	48.00	48.00	4.00
12	24	79.16	20.83	...
13	45	77.77	20.00	2.22
14	17	88.23	11.76	...
	<hr/> 513	<hr/> 36.06	<hr/> 58.47	<hr/> 5.46

TABLE XII.

## Nutrition (Boys).

	Number Examined	Good, above average. Percentage	Medium, average. Percentage	Bad, below average. Percentage
Examined for first time	572	43.18	48.42	8.39
"    on entering Senior Dept.	217	38.24	44.23	17.51
"    at 11 years of age .	230	40.00	49.56	10.43
"    on leaving school .	111	50.45	38.73	10.81
<i>Average for 1909 .</i>	<i>...</i>	<i>43.28</i>	<i>42.76</i>	<i>13.94</i>

TABLE XIII.

## Nutrition (Girls).

	Number Examined	Good, above average. Percentage	Medium average. Percentage	Bad, below average. Percentage
Examined for first time	513	36.06	58.47	5.46
"    on entering Senior Dept.	239	28.03	61.92	10.04
"    at 11 years of age .	230	49.13	46.52	4.34
"    on leaving school .	129	75.19	24.03	.77
<i>Average for 1909 .</i>	<i>...</i>	<i>45.37</i>	<i>49.52</i>	<i>5.26</i>

One hundred and two children who were considered to be particularly badly nourished last year were examined in this respect this year. Twenty had considerably improved, 41 had improved slightly, while a like number continued much the same. There was no organic disease to account for this condition, and in most of those latter it must be regarded as mainly due to want of proper feeding.

### CLEANLINESS.

The results of this year's inspection show a distinct improvement in the general cleanliness of the children as a whole. This is noticeable both among the girls and the boys, and Dr. Mouat and myself are satisfied of this very gratifying change. It has been observed, not only during the routine examination but also on surprise visits paid to the schools, and is in a large measure to be attributed to the work of the School Nurses. The conditions of the homes and care expended on the children is usually reflected in the degree of cleanliness shown by the children. In a few instances parental neglect is obviously the cause of the dirty and unhealthy condition of the child, but in many more the inadequacy of conveniences for personal washing, especially where the family is a large one, is a far more potent factor. It should, I think, be made imperative in all future plans for houses, however humble, that such plans should include conveniences for bathing, if they are to be considered satisfactory. A bath in a house is not a luxury; it is as much a necessity as a closet or a kitchen. It is of little value to educate children to keep themselves clean if we do not provide them with the means of so doing. In the Burgh the deficiency of this bathing accommodaton is relieved by the provision of public baths of every description at a very cheap rate, but at the same time even this rate becomes a consideration, when the small sum for one bath is multiplied by the number of baths required for a large family. With the predicted increase in population, building operations for all forms of houses are likely to proceed at a rapid rate, and I would ask those who are interested in such matters to urge that the advantages which they themselves unconsciously enjoy should not be considered too luxurious for the inhabitants of humbler dwellings. In the meantime there are bound to be a number of children who are not clean attending the schools. The condition of children with

regard to cleanliness is classified under three headings, namely, good, medium, and bad. There is only one standard of cleanliness which can readily be considered satisfactory, and that is good. As will be seen from the figures given in Tables XV. and XVII., though we have improved, we are far from attaining to this standard. At the present time none of the schools are provided with baths of any description, whereby children may be encouraged in their use. In all future school buildings and alterations I feel sure this matter will receive the attention it deserves.

TABLE XV.

**Cleanliness (Boys).**

	Number Examined	Good, above average. Percentage	Medium average. Percentage	Bad, below average. Percentage
Examined for first time	569	65.55	29.52	4.92
"    on entering Senior Dept.	217	65.89	27.18	6.91
"    at 11 years of age	230	64.78	26.52	8.69
"    on leaving school	111	68.46	24.32	7.20
<i>Average for 1909</i>	...	61.02	29.40	9.57

TABLE XVII.

**Cleanliness (Girls).**

	Number Examined	Good, above average. Percentage	Medium average. Percentage	Bad, below average. Percentage
Examined for first time	513	67.44	31.18	1.36
"    on entering Senior Dept.	239	66.94	29.28	3.76
"    at 11 years of age	230	70.86	28.26	.86
"    on leaving school	129	77.51	21.70	.77
<i>Average for 1909</i>	...	58.41	35.56	6.01

One bath in the School Clinic has clearly shown what advantages children will take of a bath when put at their disposal. Some of the children have asked to be allowed to make use of the bath, and attend regularly. The number of baths which have been given during the past four months is 175. Of the boys who have been under observation during the year and were in a very dirty condition, 45 % have become clean, 35 % improved, while 20 % remain very much the same. One child alone calls for special mention, chiefly because his physique has improved proportionately with the condition of his skin. Instead of the boy being dirty, he was found to be very clean, and during the year his weight has increased by 15 lbs. Though undoubtedly other factors have contributed to this very satisfactory condition, no little importance is to be attached to the improved function of the skin by the removal of dirt. Four boys were found during the routine inspection to be verminous. Seven were found with nits in the hair. Six of these were among children examined for the first time. In all cases the hair had been allowed to grow far too long. Cleanliness among the girls has been chiefly marked by the continued improvement in the condition of the heads. At the opening of the School Clinic several children with indescribable conditions were dealt with by the School Nurse. One girl admitted having been unable to sleep for more than a week owing to the irritation of the vermin. Her general condition, under treatment for the head, improved at a rapid rate. These cases alone would have justified the establishment of this institution. Much has been done by the parents and by the children themselves in contributing to this gratifying state of affairs. A large number of them have fallen in with the suggestion of wearing the hair plaited. In their own interests I do not think it would bear hardly on parents if they were compelled to send their girls to school with plaited hair.

TABLE XIV.

## Cleanliness (Boys).

Age	Number Examined	Good, above average.	Medium, average.	Bad, below average.
		Percentage	Percentage	Percentage
4	41	56.09	31.70	12.18
5	149	67.78	27.51	4.69
6	89	53.93	40.44	5.61
7	43	67.44	25.58	6.96
8	56	64.28	32.14	3.57
9	30	70.00	20.00	10.00
10	25	68.00	32.00	...
11	23	78.26	31.73	...
12	53	69.81	26.41	3.77
13	45	73.33	26.66	...
14	15	66.66	26.66	6.66
	569	65.55	29.52	4.92

TABLE XVI.

## Cleanliness (Girls).

Age	Number Examined	Good, above average.	Medium, average.	Bad, below average.
		Percentage	Percentage	Percentage
4	32	50.00	46.87	3.12
5	142	69.01	29.57	1.40
6	113	57.52	40.70	1.76
7	58	56.89	43.10	...
8	27	59.25	40.74	...
9	12	83.33	8.33	8.33
10	18	77.77	22.22	...
11	25	72.00	28.00	...
12	24	83.33	16.66	...
13	45	86.66	11.11	2.22
14	17	100.00	...	...
	513	67.44	31.18	1.36



The most noticeable features of the accompanying Tables (XIV., XV., XVI., and XVII.) is the rise and fall in the standard of cleanliness. Both among the boys and girls the infants are clean due to the mother's care. On entering the senior school at about 8 years of age, girls naturally do not receive the same parental supervision, and the percentage of those unsatisfactory in this respect is increased. At 11 years and onwards, when the children are taking an interest in their own personal cleanliness, the standard is again high. Boys with later development do not reach this standard until much older than the girls.

### TEETH.

Tables XVIII. and XIX. give the results of the examinations of the teeth of boys and girls respectively, examined for the first time. The classification is arranged into those with a sound denture, those with a good, medium and bad set of teeth. Similarly Tables XX. and XXI. give the results of the examinations at the special periods with the various percentages obtained last year. The high percentage of the children examined for the first time with a sound set of teeth, which is 11.71 % for the boys, and 8.96 % for the girls, is due to the larger number examined at 4, 5, and 6 years of age, when the percentage of children with such a condition is naturally high. I have to refer again to the fact that this examination is conducted without a dental mirror, and, therefore, I believe, represents the number of children with sound teeth at too high an average. Though the percentage of boys with sound teeth is higher than that of girls, yet the number of the former recorded with a bad condition of teeth is at the same time far greater.

TABLE XVIII.

Teeth (Boys).					
Age	Number Examined	Sound. Percentage	Good. Percentage	Medium. Percentage	Bad. Percentage
4	41	17.07	34.14	36.58	12.19
5	149	18.12	28.85	40.93	12.07
6	89	10.11	16.85	52.80	20.23
7	43	6.97	20.92	41.85	30.23
8	56	7.14	19.64	35.70	37.49
9	30	3.33	23.33	33.33	40.00
10	25	8.00	28.00	28.00	36.00
11	23	4.34	34.78	34.78	26.09
12	53	15.09	39.62	32.07	13.20
13	45	6.66	28.88	48.88	15.55
14	15	4.00	12.00	36.00	8.00
Over 14	3	33.33	66.66	...	...
	572	11.71	26.74	40.90	20.62

TABLE XIX.

Teeth (Girls).					
Age	Number Examined	Sound. Percentage	Good. Percentage	Medium. Percentage	Bad. Percentage
4	32	28.12	28.12	37.50	6.25
5	142	16.18	33.09	39.51	11.19
6	113	4.66	21.28	59.42	14.62
7	58	1.70	27.30	53.91	17.07
8	27	3.70	3.70	61.46	11.10
9	12	...	25.00	58.33	16.66
10	18	...	50.00	50.00	...
11	25	8.00	48.00	40.00	4.00
12	24	4.16	41.66	45.82	8.33
13	45	6.66	42.22	40.00	11.11
14	17	5.88	41.16	47.05	5.88
	513	8.96	30.79	48.53	11.69

TABLE XX.

**Teeth (Boys).**

	Number Examined	Sound. P'centage	Good. P'centage	Medium. P'centage	Bad. P'centage
Examined for first time	572	11.71	26.74	40.90	20.62
"    on entering Senior Dept.	217	3.22	22.11	35.94	38.70
"    at 11 years of age .	230	5.65	34.78	40.86	18.69
"    on leaving school .	111	8.10	33.33	40.54	18.01
<i>Average for 1909 .</i>	<i>...</i>	<i>7.93</i>	<i>26.29</i>	<i>42.91</i>	<i>22.86</i>

TABLE XXI.

**Teeth (Girls).**

	Number Examined	Sound. P'centage	Good. P'centage	Medium. P'centage	Bad. P'centage
Examined for first time	513	8.96	30.79	48.53	11.69
"    on entering Senior Dept.	239	3.76	25.10	56.48	14.64
"    at 11 years of age .	230	4.78	50.00	40.00	5.21
"    on leaving school .	129	11.62	51.16	35.65	1.85
<i>Average for 1909 .</i>	<i>...</i>	<i>6.84</i>	<i>28.35</i>	<i>50.37</i>	<i>14.42</i>

In the group of children entering the Senior Department of the schools it will be observed that both the boys and the girls show a very low percentage with a sound set of teeth and a high percentage with bad teeth, particularly among the boys. The nutrition of the same group of children has also been found to fall considerably lower than other groups, as will be seen by reference to Tables XII. and XIII. The connection between these two facts is somewhat significant. I have alluded in previous Reports to the important rôle played by the teeth in digestion and

nutrition. It is therefore unnecessary to add anything further.

A great deal has been done during the past year in endeavouring to make the children familiar with the use of a tooth-brush, but it will take a very long time to thoroughly educate and make the children and their parents appreciate the value of clean teeth.

Tables XXII., XXIII., XXIV., and XXV. give more exactly the condition of the teeth of the children. These Tables show the percentage of children with decaying first and second teeth, singly or combined, with loss of some of the second set either alone or in combination with decaying teeth. In previous years reference has been made to the early age at which there is evidence of decay in the permanent set. This fact is again prominent this year, for, both amongst the boys and the girls, the second set have commenced to decay in some children at six years of age, reaching quite a high percentage at the next year.

TABLE XXII.

## Teeth (Boys).

	Number	Sound.	Decaying,		Decaying,	Decaying	
			1st.	2nd.	1st & 2nd.	Lost and lost	2nd.
Age	Ex- amined.	Per- centage.	Per- centage.	Per- centage.	Per- centage.	Per- centage.	Per- centage.
4	41	17.07	82.92	...	...	...	...
5	149	18.12	81.87	...	...	...	...
6	89	10.11	87.62	...	2.24	...	...
7	43	6.97	67.44	2.32	20.93	...	2.32
8	56	7.14	58.92	...	30.35	...	3.57
9	30	3.33	43.33	...	40.00	...	13.33
10	25	8.00	20.00	16.00	44.00	4.00	8.00
11	23	4.34	30.43	26.08	26.08	4.34	8.69
12	53	15.09	7.54	37.72	20.76	1.88	16.97
13	45	6.66	2.22	46.66	13.33	4.44	26.66
14	15	6.66	...	53.33	...	...	40.00
Over 14	3	33.33	...	33.33	...	...	33.33
	572	11.71	56.99	10.66	12.93	.87	6.81

TABLE XXIII.

## Teeth (Girls).

Age	Number Examined.	Sound. Per- centage.	Decaying, 1st. Per- centage.		Decaying, 1st & 2nd. Per- centage.	Decaying Lost and lost 2nd. Per- centage.	
			Per- centage.	Per- centage.		Per- centage.	Per- centage.
4	32	28.12	71.87	...	...	...	...
5	142	16.19	83.80	...	...	...	...
6	113	4.42	83.18	.88	11.50	...	...
7	58	1.72	75.86	6.89	15.51	...	...
8	27	3.70	44.44	18.52	33.33	...	...
9	12	...	41.66	25.00	25.00	8.33	...
10	18	...	27.77	38.88	16.66	16.66	...
11	25	8.00	12.00	24.00	44.00	4.00	8.00
12	24	4.16	4.16	29.17	37.49	8.32	16.66
13	45	6.66	8.88	46.66	13.32	4.44	20.00
14	17	5.87	5.87	64.70	11.76	...	11.76
513		8.96	60.62	12.67	12.67	1.75	3.31

As in former years, a large number of children have been found with remains of primary teeth among the permanent teeth. These undoubtedly set up early decay in the permanent teeth, and when irregularly placed frequently give rise to inflammation and ulceration of the membrane of the cheeks and gums. It is to be hoped that this condition will be as uncommon in a few years time as it is common at the present time. Particular attention should be paid to the early age at which children are found to have lost some of the permanent teeth. As an example, it is sufficient to mention one boy twelve years of age who only possessed nine teeth. Such reckless extraction of the permanent set is to be condemned, and although it does not as a rule reach this limit, it is very common to meet with many children who have had their important grinding teeth removed at any early age. This is in a great measure due to the dentistry practised by unqualified dentists whose skill is proportionate to their fees.

TABLE XXIV.

		Teeth (Boys).						
		Number Ex- amined	Sound.	Decaying 1st.	Decaying 2nd.	Decaying 1st & 2nd.	Lost 2nd.	Decaying and Lost 2nd.
			P'centage	P'centage	P'centage	P'centage	P'centage	P'centage
Examined for	first time	572	11.71	56.99	10.66	12.93	.87	6.81
"	on enter- ing Sen. Depart. .	217	3.22	50.69	1.38	36.86	...	7.83
"	at 11 years of age .	230	5.65	7.39	26.08	43.47	1.30	16.07
"	on leav- ing school	111	8.10	...	52.27	8.10	3.60	27.92

TABLE XXV.

		Teeth (Girls).						
		Number Ex- amined	Sound. P'centage	Decaying 1st. P'centage	Decaying 2nd. P'centage	Decaying 1st & 2nd. P'centage	Lost 2nd. P'centage	Decaying and Lost 2nd. P'centage
Examined for	first time	513	8.96	60.62	12.67	12.67	1.75	3.31
"	on enter- ing Sen. Depart. .	239	3.76	51.87	1.67	36.40	...	6.27
"	at 11 years of age .	230	4.78	14.78	24.34	48.26	.86	6.95
"	on leav- ing School	128	11.62	2.32	52.71	15.50	2.32	15.50

It is satisfactory that the results of the examinations made in previous years, which have clearly demonstrated the imperfect condition of the teeth of the children, have also led to the equipment of a Dental Department of the School Clinic and to the appointment of a School Dentist. The results of this year's examination of the teeth have further established the need of such an institution. The problem of dental treatment for school children is not an easy one to

grapple with, but I am convinced that the benefits to be derived from its solution will be enormous, however great are the difficulties which have to be overcome. It will rest with each community to deal with the teeth of the children in its own way and according to the local circumstances and conditions. The work in this town, if it is to be carried out to any conclusion at all, requires every working day to be given to it, and even then it will be some years before every school child has received attention, unless more than one dentist be appointed. However, by attacking first of all the younger age of permanent teeth, a great deal can be done, but it is quite impossible, and more or less useless, to deal promiscuously with children of all ages. The object of school dentistry lies mainly in the preservation of the permanent teeth, which practically amounts, at first, to the care of the first molars at about six years of age, though, from observation made, it has been found that these appear in a fair number of children before that age. 7.3 % at 4 years, and 17.4 % at 5 years, showed presence of permanent teeth. From the fact that those teeth are difficult to clean and form a ledge on which decomposing food is liable to collect, they are subject to early decay. Early decay in these teeth is difficult to see by mere inspection, especially without a dental mirror, and even then, in its earlier stages, is liable to be overlooked, unless a dental probe is used in the examination. An examination carried out with these instruments would, I have no hesitation in saying, reduce still further the number of children who are classified as having sound teeth. The time spent, however, on such an examination by the School Doctor would not be of any value, except in compiling more accurate statistics. I think it would be advisable to confine the work of the School Dentist to one age group of children, to carry out the complete inspection of that age group and the treatment of such as require it. This age group need not be specially examined in

this respect at the routine medical examination, except to note any improvement in the physique of children whose mouths have received attention. With regard to the other ages, the medical examination must still be concerned chiefly with the general condition of the mouth, and, as is done at the present time, the number of decaying teeth should be noted. This is the scheme that I propose to adopt during the coming year. I do not think any purpose would be served by a more elaborate examination of the mouth. During the examination 14 children have been found with mouths in a very unsatisfactory condition and one which cannot but fail to produce a very detrimental effect on the general health. In this condition not only are the teeth decaying, but more important still, the gums around the teeth are being converted into a tissue, the discharge from which, mixed with saliva, is continuously being swallowed.

### VISION.

The vision has been tested this year in the same way as in former years by the use of Snellen's test type. Where this examination has not been carried out personally by Dr. Mouat or myself, we have ourselves been present and supervised the test. In such cases the examination has been made either by the School Nurses or by Students from the College of Hygiene and Physical Training. Each eye has been tested separately. In the Tables XXVI. and XXVII. will be found the results of the tests applied to 1502 boys and 1333 girls at the various ages. Seeing that for the last three years the vision of girls has been inferior to that of the boys, one is led to the conclusion that this condition is to be regarded as a natural state of affairs. We have found that 12.45 % of the girls have vision which may be classified as bad compared with 6.38 % of the boys. As a whole the general survey resembles very closely that of former years and has



given a very similar result. In my Report of last year I referred to a particular school as having a high percentage of children with defective vision. The examination this year did not substantiate this statement, and I can only believe that the test last year was not carried out in as good a light as in other schools. Particular attention was paid to that point this year.

TABLE XXVI.

## Vision (Girls).

Age	Number Examined	Good Vision 6/6 Percentage	Fair Vision 6/9 Percentage	Bad Vision 6/12 and worse Percentage
7	40	72.50	2.50	25.00
8	149	73.15	14.09	12.74
9	230	77.82	10.86	11.30
10	243	73.66	15.63	10.69
11	286	76.57	10.48	12.94
12	205	77.07	10.73	12.17
13	153	80.39	7.84	11.76
14	27	74.07	7.40	18.51
	<hr/> 1333	<hr/> 76.21	<hr/> 11.32	<hr/> 12.45

TABLE XXVII.

## Vision (Boys).

Age	Number Examined	Good Vision 6/6 Percentage	Fair Vision 6/9 Percentage	Bad Vision 6/12 and worse Percentage
7	44	81.81	9.09	9.09
8	159	82.38	6.91	10.69
9	218	91.74	5.04	3.21
10	227	92.95	4.40	2.64
11	248	87.90	4.83	7.25
12	268	88.43	4.85	6.71
13	239	90.37	3.76	5.85
14	34	100.00	...	...
Over 14	65	80.00	1.53	18.46
	<hr/> 1502	<hr/> 88.88	<hr/> 4.72	<hr/> 6.38

Too much attention cannot, I think, be given to the importance of avoiding eye-strain in children as a means of preventing visual defects. This is particularly important in a city with industries which demand acuteness of vision, such as is required by the workers of this town. One of the main factors in the production of eye-strain is the improper lighting of class-rooms. The efficient lighting of a class-room comprises not only sufficiency of light but also that the light should be admitted in the proper manner. This latter point has been, I regret to say, frequently overlooked in order to accommodate a greater number of pupils in the class-rooms. It is, however, a matter of considerable importance. In many schools, even in the most recent, the light is admitted either on the right-hand side or from the back of the pupils, both of which should be avoided whenever possible. In many classes the position of the board is not the most suitable, and, I feel convinced, is to some extent productive of eye-strain. The hours spent continuously at school are also likely to be extremely deleterious to a delicate and growing structure such as the eye of a young child. It would be well if this point could be thoroughly appreciated. Many children examined at the end of the week fall short of the normal standard, who can easily reach this standard after the eyes have been rested on Saturday and Sunday. Inability to read at the proper distance must not be regarded altogether as a local condition. One other factor tending in all cases to produce eye-strain, which, if continued, will permanently affect the vision, is the general debility of the child. The muscles of the eye are affected in proportion to the rest of the body from lack of nourishment or other conditions producing general ill health. Children exhibiting apparent visual defects when in ill health frequently become normal if the general health is improved. Rest for the body as well as the eye, combined with fresh air and good food will soon restore the bodily health and normal vision to many of the more delicate children whose vision at present falls below this point.

In the winter artificial lighting is absolutely necessary during the last period of school hours. Much improvement has been effected in this respect in some of the schools, but I do not think that any work which demands a tax upon the eye should be allowed in the curriculum during that part of the day at that time of the year.

TABLE XXVIII.

Vision.						
Age	Boys			Girls		
	Number with Normal Vision in both Eyes	Number with Defective Eye. Fair	Number with Defective Eye. Bad	Number with Normal Vision in both Eyes	Number with Defective Eye. Fair	Number with Defective Eye. Bad
7	36	1	2	29	1	19
8	131	7	15	109	11	21
9	200	7	17	179	18	25
10	211	11	7	179	24	54
11	218	10	21	219	25	38
12	237	14	19	158	8	23
13	216	11	21	123	5	19
14	34	2	2	20	...	1
Over 14	52	1	4	...	...	...
	1335	64	108	1016	92	200

In Table XXVIII. is set forth the number of children who, although they are able to read at the normal distance using both eyes, either have only fair or bad vision when each eye is tested separately. Among this latter class is included all those who have completely lost the sight of one eye. A complete list of all those children who are blind in one eye and the cause, is shown in Table XXIX. The sight of the eye in many of these cases, one ventures to think, could have been preserved had proper measures been taken in time. Particularly is this the case in loss of vision produced by opacities, squints, and refractive

errors. Accidents and injuries, though sometimes preventable, are often unavoidable. In four cases out of the number given in Table XXIX. the vision of the other eye is also impaired.

TABLE XXIX.

**Total Loss of Vision in One Eye and Cause.**

	Boys	Girls	Total
Corneal Opacities . . .	5	2	7
Convergent Squints . . .	6	6	12
Divergent Squint . . .	...	1	1
Injuries . . . . .	1	3	4
Cataract . . . . .	1	...	1
Optic Atrophy . . . . .	...	1	1
Keratitis (old) . . . . .	...	1	1
Refractive Errors . . . . .	2	8	10
Lost . . . . .	2	...	2
	<hr/> 17	<hr/> 22	<hr/> 39

**Blepharitis and Styas.**

Inflammation of the eyelids was found affecting 292 children. In some the disease was found accompanying visual defect and would improve with the use of spectacles. In the worst cases, however, that have come under notice other causes appear more prominent. The social conditions of those cases are very much below what they should be. It is a recognised fact that unhygienic surroundings are factors in the production of these diseases, and the experience obtained among the children substantiates this view very markedly. The bad cases of blepharitis among the children almost invariably come from those homes in which the housing and other home conditions are very inferior. Treatment has been given to many in the School Clinic, but it is only temporarily helpful. Permanent good can only be expected when the cause is

removed. This, like many other diseases found among the school children, reflects the condition of the homes. In some the fault lies with the parents, in others less with them than with the house in which they are compelled for pecuniary reasons to live. There is a tendency in all building schemes to cater for the more prosperous among the working classes and to lose sight of the very poorest. Perfectly simple and hygienic houses should be built at the lowest possible rental, for it is the poorest working class that is the worst housed.

### **Conjunctivitis.**

36 children were found with inflammation of the Conjunctiva. In 4 boys and 3 girls the condition was acute. These were referred for immediate treatment. In the remainder the condition was sub-acute.

### **Squint.**

This condition was observed in 94 children. In 13 cases the squinting eye had lost all vision, and in seven others the vision was very considerably impaired. The remainder either have normal or only slightly impaired vision. The importance of correction either by spectacles in early life or by operation has been pointed out in previous Reports. Not only would the vision be thus considerably improved, but the handicap from this disfigurement often reduced. Unfortunately the refractive error in such cases often demands a complex lens for its improvement, and, as will be pointed out later, this is extremely difficult to keep accurately applied to the eye.

### **Corneal Opacities.**

These arise from previous inflammation on the front of the eye. In previous Reports allusion has been made to the ignorance which exists with regard to inflammation of the eye and the result. Fifty-two

children were found with this condition, in 7 of whom the eye was rendered sightless. In 8 others the vision was very much impaired, and in the remainder to a slight extent interfered with, the scar being either very small or else not in the line of vision.

### Keratitis.

Three children were found during the examinations with inflammation of the front of the eye. If neglected, this would in all probability lead to opacities. These were referred for treatment, which the parents obtained.

TABLE XXX.

#### Diseases, etc., of the Eyes and Eyelids.

	Boys. Number Examined (1502)	Girls. Number Examined (1333)	Total. Number Examined (2835)
Squints . . . . .	52	42	94
Styes . . . . .	5	24	29
Opacities (Corneal) . . .	32	20	52
Blepharitis and Trichiasis	78	214	292
Injuries . . . . .	3	3	6
Conjunctivitis . . . . .	7	29	36
Cataract . . . . .	1	...	1
Keratitis Strumous . . .	1	2	3
Optic Atrophy . . . . .	...	1	1
Lost .. . . .	2	...	2
Congenital Deformities .	1	5	6
	<hr/> 182	<hr/> 340	<hr/> 522

### Vision.

Thirty-eight boys and 56 girls were found wearing spectacles. In some cases the apparatus was suitable to the condition, but in others the vision was not improved, and in others again the defect was increased. The majority of children whose vision is so much im-

paired as to require correction by lenses present to a greater or lesser extent some form of astigmatism. For the successful correction of this defect, a lens with a convexity or a concavity greater in one axis is required. That the correction should be continuous it is essential that the lens should remain in front of the eye in the same position. This requires in the case of children a very rigid frame. In the course of examination it is common to find the frame much bent and twisted, with the result that the position of the lens is considerably altered. A frame that can withstand the rough usage to which it is submitted by children is not easy to find. If it is made of hard and non-pliable material it is soon broken, and the household mending, by string, cotton, or wire, alters the fitting of the frame. If, on the other hand, it is made of pliable metal it soon very closely resembles a corkscrew. The alteration thus produced in the position of the lens, instead of improving, increases the defect in vision and the strain on the eye.

The changes which take place in the eyes of children as they grow are very great, and consequently the vision is at the same time altering. Lenses which are suitable at one time, in a few months frequently require changing. Similarly the frames which hold the lenses are rapidly outgrown. The initial cost is therefore not the only consideration for the parent. The provision, mending and changing of a child's spectacles become no mean item in a working man's expenditure. In a town of this size the Medical Inspector of school children, after working for some years among the children, becomes more or less familiar with the home circumstances of many of them. I make this my excuse for hesitating to recommend spectacles in some of those cases where they would appear at first sight to be desirable. To conscientious parents, who are by far the greater number, the provision of spectacles means denying themselves other things which are more necessary. As one parent aptly remarked—

"It is better for my child to have a full stomach and no 'specs' than 'specs' and an empty stomach." I understand that in future the Civic Guild will assist in supplying spectacles. In spite of all that is being done for them and their children, the true spirit of independence still rightly remains strong among the people, which is an encouragement, if such is needed, to do more for them. It is to be hoped that before long there will be a special ophthalmic surgeon appointed to the School Clinic to undertake corrections and to supervise the vision of those children who are found defective during the routine inspection. The offer of the Civic Guild for the provision of spectacles, which should be supplied under contract at a reduced rate, could thus be more fully and more easily taken advantage of and the funds supplied more economically applied.

### EARS.

In Tables XXXI. and XXXII. is shown the number of boys and girls at varying ages with markedly defective hearing. For practical purposes the hearing may be considered defective to this extent, when the ordinary conversational voice is not readily interpreted. Loss of acuteness of hearing above this point, except in particular occupations, does not cause interference, but, if it reaches this stage, it must to some extent handicap the future of the child. It would be as well if parents could learn, once and for all, that discharge from the ear is not an essential accompaniment of teething and other complaints of childhood. In the Tables the cause of this defective hearing, so far as it has been possible to ascertain it, is shown, and it will be seen that by far the greater number had suffered, or were suffering at the time the examination was made, from discharge from the ears. It should be further impressed upon all that discharge from the ear is but the outward manifestation of inward disease of the ear (in some cases of a very serious nature), and



that so long as the disease is present the discharge will continue. The longer the disease is permitted to remain untreated, the greater the risk of serious disease and permanent loss of hearing. Many cases of purulent discharge from the ears have been under treatment at the School Clinic. All have received advice from their own Medical Attendants, the School Nurses having visited the houses in every case, and I think the parents have as far as possible carried out the advice given. It cannot be too strongly pointed out that these cases of chronic ear discharge are not cured in a few days. This fact is often the cause of children and their parents abandoning treatment which does not immediately effect a cure. In addition to the benefit derived by the child from treatment, I cannot but think that in the future when these children have children of their own they will regard discharging ears as a matter demanding skilled attention. Medical Inspection will undoubtedly in this respect fulfil an important educational *rôle*.

Of those children who have been found with defective hearing, 27 were among those who were examined for the first time. Apart from aural discharge, adenoids account for defective hearing in 19 children. Sixty-five boys and 28 girls were found defective in one ear, and 37 boys and 18 girls showed defect in both ears.

Reference has been made in previous years to the two boys whose hearing is completely destroyed as the result of cerebro-spinal meningitis. Both these boys should receive special instruction in lip reading. One boy is learning to some extent by himself.

An operation for the removal of disease of the bones of the ear and those adjacent was found to have been performed on seven children. These operations might possibly have been avoided had the disease received attention at an earlier stage.

TABLE XXXI.

## Ears (Boys).

Age	Defective.			Cause of Defect.				Mastoid Operation
	Number Examined	One Ear	Both Ears	Old Dis-charge	Purulent Dis-charge	Wax in Ears	Adenoid Growths	
4	44	...	1	1	...	...	...	...
5	178	4	2	...	2	1	1	...
6	219	3	3	1	3	...	1	1
7	228	6	4	1	6	...	1	...
8	249	2	...	...	1	...	...	1
9	232	8	1	...	3	1	...	1
10	233	7	9	5	3	1	2	1
11	253	8	6	...	2	...	4	...
12	270	13	5	2	6	1	3	1
13	263	12	4	1	7	...	...	1
14 and over } }	82	2	2	...	...	...	...	1
	2251	65	37	11	33	4	13	6

TABLE XXXII.

## Ears (Girls).

Age	Defective.			Cause of Defect.				Mastoid Operation
	Number Examined	One Ear	Both Ears	Old Dis-charge	Purulent Dis-charge	Wax in Ears	Adenoid Growths	
4	18	...	1	...	1	...	...	...
5	172	2	...	...	2	...	...	...
6	236	3	1	...	3	1	...	...
7	255	4	3	...	4	2	1	...
8	252	4	2	...	2	1	2	...
9	243	3	1	1	1	1	1	...
10	233	5	3	1	4	2	2	...
11	262	4	1	...	5	...	...	...
12	208	...	3	...	...	...	...	...
13	231	1	3	1	...	2	...	1
14	93	2	...	1	1	...	...	...
	2203	28	18	4	23	9	6	1

**ADENOIDS.**

These growths were observed in 24 children who were examined for the first time.

Of those cases referred to in previous years 26 have received operative treatment.

TABLE XXXIII.

**Adenoids.**

Age	Boys.			Girls.		
	Number Examined	Mouth Breathers	Adenoids	Number Examined	Mouth Breathers	Adenoids
4	44	2	...	18	3	...
5	178	6	1	172	7	3
6	219	5	3	236	12	6
7	228	...	7	255	13	9
8	249	6	5	252	10	6
9	232	...	5	243	9	5
10	233	...	10	233	12	7
11	253	2	5	262	8	2
12	270	1	3	208	9	4
13	263	1	...	231	5	3
14	60	...	...	73	1	1
	2229	23	39	2183	89	46

The total number of children who were found with adenoids was 85 out of 2229 boys and 2183 girls examined. Many of those who are classified as mouth breathers are those in whom the habit persists after the removal of the growths. As the class teachers become more familiar with children who have been operated upon for this condition and realise the importance of insisting upon the children breathing correctly while at school, this number should diminish. The gymnastic lessons are of value in this respect, but deep breathing in most of the gymnasia and class-rooms ought to be abolished. Natural breathing should be taught correctly. At the present time breathing is usually carried out through the nose only when children are asked

to breathe deeply. Gymnastic teachers could do a great deal by insisting on children breathing through the nose throughout the whole of the lesson instead of limiting it to a particular exercise which in some instances may be harmful rather than beneficial. Much is being done here, as in other places, by the gymnastic teachers, to educate children to keep their nasal passages clean, by the use of a pocket handkerchief. There are, however, a large number of children who are still unacquainted with the value and comfort to be derived from its use. The provision of this article does entail a certain amount of expense, but soft paper forms a valuable substitute where other material is lacking. This is very easily supplied in all class-rooms when required for immediate use, as is so often the case.

### TONSILS.

Nine girls and 2 boys examined for the first time showed a well-marked enlargement of these structures. The enlargement is sufficient to produce considerable interference with the voice. Apart from other considerations, this is enough to call for immediate treatment. Of those children who have been under special observation for this condition during the past year, 20 have improved considerably, 18 remaining very much the same.

Tables XXIV., XXV., XXVI., and XXVII. give the results of the observations made.

TABLE XXXIV.

**Tonsils (Boys).**

Age	Number Examined	Slightly Enlarged. Percentage	Mediumly Enlarged. Percentage	Markedly Enlarged. Percentage
4	41	9.75	...	...
5	149	10.73	4.69	.67
6	89	11.23	5.61	1.12
7	43	...	4.65	...
8	56	10.71	5.35	...
9	30	23.33	...	...
10	25	8.00	4.00	...
11	23	8.69	...	...
12	53	5.66	3.73	...
13	45	11.11	4.44	...
14	15	6.66	...	...
Over 14	3	...	...	...
	<hr/> 572	<hr/> 9.79	<hr/> 3.84	<hr/> .34

TABLE XXXV.

**Tonsils (Girls).**

Age	Number Examined	Slightly Enlarged. Percentage	Mediumly Enlarged. Percentage	Markedly Enlarged. Percentage
4	32	9.37	3.12	...
5	142	9.15	3.52	2.11
6	113	7.07	4.42	2.65
7	58	13.79	6.89	1.72
8	27	22.22	3.70	...
9	12	8.33	...	...
10	18	5.55	5.55	5.55
11	25	8.00	...	...
12	24	8.33	29.16	...
13	45	13.33	8.88	2.22
14	17	11.76	...	...
	<hr/> 513	<hr/> 10.13	<hr/> 5.45	<hr/> 1.75

TABLE XXXVI.

**Tonsils (Boys).**

	Number Examined	Slightly Enlarged. Percentage	Mediumly Enlarged. Percentage	Markedly Enlarged Percentage
Examined for first time	572	9.79	3.84	.34
"    on entering Senior School	217	8.29	1.84	1.38
"    at 11 years of age .	230	13.47	3.47	.43
"    on leaving school .	111	6.30	.90	...
<i>Average for 1909</i> .	...	10.02	3.42	.84

TABLE XXXVII.

**Tonsils (Girls).**

	Number Examined	Slightly Enlarged. Percentage	Mediumly Enlarged. Percentage	Markedly Enlarged. Percentage
Examined for first time	513	10.13	5.45	1.75
"    on entering Senior School	239	13.80	6.69	4.18
"    at 11 years of age .	230	12.60	6.52	3.47
"    on leaving school .	129	13.95	6.20	3.10
<i>Average for 1909</i> .	...	16.23	5.08	2.85

**CERVICAL AND SUBMAXILLARY GLANDS.**

The most frequent cause of enlargement of the glands in these regions is some form of irritation about the head and face. This irritation is mainly produced by sores and other conditions of the head and septic conditions of the mouth and throat. It is rare for a child to arrive at school age without having been affected in one or other of these ways. The enlargement in the glands persists to some extent after the cause has ceased to exist. It is not surprising, there-

fore, to find a large number of children with glands that are easily felt.

TABLE XXXVIII.

**Glands (Boys).**

Age	Number Examined	Palpable. Percentage	Slightly Enlarged. Percentage	Well Marked. Percentage	Scars of Abscess or Previous Operation. Percentage
4	41	73.17	14.63	...	2.43
5	149	72.48	12.75	.67	1.34
6	89	66.29	22.47	...	4.49
7	43	69.76	18.60	...	4.64
8	56	73.21	16.07	1.78	...
9	30	86.66	6.66	3.33	...
10	25	76.00	16.00	...	8.00
11	23	43.47	...	...	4.34
12	53	60.37	20.75	...	...
13	45	57.77	8.88	...	...
14	15	33.33	13.33	...	6.66
Over 14	3	100.00	...	...	...
	572	68.06	14.86	.52	2.27

TABLE XXXIX.

**Glands (Girls).**

Age	Number Examined	Palpable. Percentage	Slightly Enlarged. Percentage	Well Marked. Percentage	Scars of Abscess or Previous Operation. Percentage
4	32	62.50	3.12	...	...
5	142	52.80	7.74	...	2.11
6	113	60.17	8.05	...	.89
7	58	63.79	13.98	...	8.62
8	27	51.85	18.51	...	3.70
9	12	16.66	16.66	...	8.33
10	18	44.44	...	16.66	16.66
11	25	48.00	20.00	4.00	...
12	24	50.00	20.83	...	29.16
13	45	35.55	4.44	...	...
14	17	17.64	...	...	...
	513	50.09	9.35	.77	.49

TABLE XL.

## Glands (Boys).

	Number Examined	Palpable P'centage	Slightly Enlarged P'centage	Well Marked P'centage	Scars of Abscess or Previous Operation P'centage
Examined for first time	572	68.06	14.86	.52	2.27
"    on entering Senior Dept.	217	54.83	24.88	.92	2.30
"    at 11 years of age .	230	74.78	12.17	...	2.13
"    on leaving school .	111	62.17	25.22	...	4.50
<i>Average for 1909 .</i>	<i>...</i>	<i>66.52</i>	<i>12.86</i>	<i>1.12</i>	<i>2.21</i>

TABLE XLI.

## Glands (Girls).

	Number Examined	Palpable P'centage	Slightly Enlarged P'centage	Well Marked P'centage	Scars of Abscess or Previous Operation P'centage
Examined for first time	513	50.09	9.35	.77	.49
"    on entering Senior Dept.	239	41.84	9.62	.41	...
"    at 11 years of age .	230	51.30...	6.09	.86	2.13
"    on leaving school .	129	52.71	13.18	...	2.32
<i>Average for 1909 .</i>	<i>...</i>	<i>49.36</i>	<i>15.88</i>	<i>2.99</i>	<i>1.91</i>

In Tables XL. and XLI. will be found the condition of the glands at the four special groups and for the year 1909. It will be observed that the percentage of children with marked enlargement of the glands appears lower this year than in the previous year. Particularly is this the case with girls. It is certainly a condition in which one would look for improvement, owing to the increased care paid to cleanliness of the



heads, but at the same time it is too early to draw definite conclusions. The results obtained are, however, encouraging. With dental treatment provided at the early age group of 6-7 years we may look for an improvement in the children entering the Senior Departments.

Tubercular disease of the glands of the neck is produced by the entrance into these structures of the particular organism. The importance of enlargement of the glands is, therefore, the possibility of this infection taking place. By referring to the Tables it will be seen that a considerable number of children show evidence of a more serious condition affecting the glands. In many this condition has been of a tuberculous nature and has required surgical treatment. The presence of tubercular disease in these glands is evidence that the child is susceptible to that disease. I have referred elsewhere to those measures which, I believe, would be advantageous in removing this susceptibility.

### DEFORMITIES.

The deformities met with among school children divide themselves into two groups—(a) Congenital; (b) Acquired. These latter arise largely from three causes—(1) Accident; (2) Disease, principally of a tuberculous nature; and (3) from faulty conditions of posture. Of all of these the one that holds out the best hope for improvement is the last. The usual part of the body to be affected is the spine. The prevention of spinal deformity produced by faulty posture must begin at an early age. We live in an artificial age in which from earliest days the child is subjected to every kind of influence likely to interfere with his proper growth. The clothes he wears, the position he is often made to assume over the arm of his mother, busy at her household duties, all conduce to the imperfect growth of the spine. Later on, the position a child habitually assumes

is one producing deformity, which, when he reaches school age, is increased by the hours spent at badly constructed desks. Prevention being better than cure, hygienic principles with regard to clothing, home life, and school desks should do much to eliminate these deformities. We are very far from making full use of these methods of prevention, particularly in regard to school furniture in our schools at the present time. When the condition is established, however, much may still be done by proper supervision and remedial exercises. Many of the school children are receiving treatment for this condition at the College Clinique. It would seem, however, with the machinery at our disposal, that even more might be attempted. The school terms do not fit in very satisfactorily with the times that the Clinique is open, so that for many weeks treatment is in abeyance. Like all other forms of treatment, unless it is continued until a cure is effected, the condition, for which it is applied, has a tendency to relapse. It is, moreover, desirable that all remedial measures for the benefit of school children should be centralised, and it is to be hoped that when future arrangements for a permanent School Clinic are considered this point will not be overlooked. If such is provided, it would be of advantage to arrange for a medical gymnast to devote the whole time to this work, irrespective of the College terms.

TABLE XLII.

**Deformities.**

Nature of Deformity	Boys.	Girls.	Total
<b>Congenital—</b>			
Harelip (operated) . . .	2	...	2
Cleft Palate (operated) . . .	1	...	1
Cleft Palate . . .	...	1	1
External Ear . . .	1	...	1
Asymmetry of Head and Face .	3	...	3
Spina Bifida . . .	2	...	2
Web Fingers . . .	1	1	2
Absence of Finger . . .	...	1	1
Web Toes . . .	1	...	1
Club-foot . . .	2	1	3
Epispadias . . .	1	...	1
<b>Accident—</b>			
Skull (Old Fracture) . . .	1	...	1
Shoulder (Ankylosis) . . .	1	...	1
Elbow (Ankylosis) . . .	3	1	4
Fingers (Amputation) . . .	2	2	4
<b>Rickets—</b>			
Limbs (well marked) . . .	25	6	31
Chest Wall (well marked) . . .	43	10	53
<b>Postural—</b>			
Spine (well marked) . . .	69	39	108
	<hr/> 158	<hr/> 62	<hr/> 220

Table XLII. gives a list of deformities found amongst the school children during the year. Those due to Tubercular Disease are not included in this Table, as they are given separately under that disease. Of those deformities which were existing at birth, operation has much improved those children with deformity of the palate. In the unoperated case and in one case operated upon, the speech is much affected. The child with deformity of the fingers will be con-

siderably handicapped. In those deformities due to accident, stiffness of the joint (ankylosis) interferes considerably with the utility of that joint. Improvement has been observed in the case of the child with the affected shoulder joint, as an increased range of movement is now possible. All the children, particularly the boys, are considerably handicapped by the condition of the elbow joint.

Spinal curvature was observed in 108 children, which it is believed is largely to be attributed to faulty posture. Reference has already been made to these cases, their prevention and amelioration.

### **TUBERCULAR DISEASE.**

No disease has aroused more widespread interest during the past few years than Tubercular Disease, or Consumption. In the subjoined Table is given the number of children with this disease, or who show marked evidence of having suffered from this disease. Those who present scars of operations or abscesses of the glands of the neck have not been included, though I believe a large number of these to have been of a tuberculous nature. It cannot be too strongly emphasised that Tubercular Disease is a disease not only of the lungs, but of all parts of the body. By looking at Table XLIII. this fact will be evident. It will be seen that among children, at any rate, bones and joints are very largely affected. Out of 23 cases this disease affects these structures in 13, which, in some of them, has produced deformity of a very grave nature. Owing to the attention that has been given to this disease, all are, or should be, cognisant to some extent of the ravages which this disease produces among the British nation, and I think we can require no further proof of this fact when we look at the number of children from 4 to 14 years in our own town upon whom this disease has left its indelible mark. We live, fortunately, however, in an age which holds out more

hope. For we know the cause of the disease, and the means of prevention and cure are to some extent within our grasp. It is a disease transmissible from one person to another; therefore it is no respecter of persons. Rich and poor are claimed as victims. "If preventable, why not prevent it?" I do not think there is any disease which demands greater efforts at prevention than this. The cure is still uncertain, therefore every effort at prevention must as far as possible be made. There are only two points in the prevention of this disease which come within the scope of the Medical Inspection of Schools. The first—To prevent the attendance at school of all those who might possibly infect others; and the second--To bring those children who appear susceptible to the disease under conditions which will render them invulnerable to it. The first is obviously quite a simple matter. There is no branch of School Inspection which has opened up such a bright vista in this seemingly hopeless branch of preventive medicine than this one of establishing Recovery Schools. I have alluded to the schools already in the course of this Report, but I would be failing in my duty if I did not emphasise the value of these institutions in connection with this disease. It is an institution such as this to which one must look for the second and much more satisfactory method. It is prevention in its truest sense, and as such does not admit of any adverse argument. It prevents the child from becoming attacked by disease by building up a resisting body, instead of allowing the disease to gain admission and then endeavouring to prevent the child infecting others. Excluding the affected child from school only prevents possible infection during school, but has not the slightest effect on the infection which takes place in the home. The question of these Recovery Schools, therefore, really passes outside the limit of Educational Bodies pure and simple, and becomes an adjunct to the Public Health Authority. It should be a munici-

pal undertaking, welcomed by all those who wish to assist in the eradication of this disease, an expense gladly borne, not only for the sake of the children of others, but also for the sake of their own children, and even, selfishly, for their own sakes. The reports of those who have had experience of those schools, particularly of Professor Williams, of Sheffield, should be sufficient to convince the most sceptical of their value.

At the present time we are without this valuable preventive measure, but I cannot doubt that before long an institution such as this will be established. The loss of one child during the year with acute Pulmonary Tuberculosis, and the obvious disadvantage from which all of the children suffer who are deformed as a result of this disease, must, I think, call attention to the urgent need for prevention.

TABLE XLIII.

**Tubercular Disease.**

Producing Deformity of—								Boys.	Girls.	Total
Face	.	.	.	.	.	.	1	...	1	
Spine	.	.	.	.	.	.	1	...	1	
Lower Jaw	.	.	.	.	.	.	2	1	3	
Leg and Arm (Amputations)	.	.	.	.	.	.	1	...	1	
Thigh and Arm (Amputations)	.	.	.	.	.	.	1	...	1	
Arm (Amputation)	.	.	.	.	.	.	1	...	1	
Elbow Joint	.	.	.	.	.	.	1	1	2	
Hip Joint	.	.	.	.	.	.	...	1	1	
Hand	.	.	.	.	.	.	1	...	1	
Lungs	.	.	.	.	.	.	5	1	6	
Epididymis	.	.	.	.	.	.	1	...	1	
Skin	.	.	.	.	.	.	1	1	2	
Ankle	.	.	.	.	.	.	...	1	1	
								16	7	23

**HEART.**

Throughout the year, each child, who, at any previous examination, exhibited any cardiac disease, or who, for any reason, was suspected of having developed such disease since the last examination, has been specially examined and the condition carefully noted. In 2 boys and 1 girl only did the conditions present evidence of having become worse. But for the systematic examination I believe that this condition would in many cases escape notice, unless some acute illness or desire to enter a public service necessitated a thorough medical examination by the family physician. It is, however, essential that children suffering from such a condition should receive special attention. Insufficiency of food, unhealthy surroundings, which in normal children produce a lowering of vitality and decrease in muscular growth, induce in these children a weakening in the muscle of the heart, which is detrimental to their well-being. I have endeavoured to ascertain for this reason the average growth of children with heart disease and compare it with the average growth of normal children of the same age, and also their average height and weight. Such children, who do not compare favourably with the average, are among those who would benefit by special attention being given to them. The period of school life is such an important period for these children, in order to fit them for life as useful citizens, that any care expended on them during this period will be fully repaid to the community in after years.

In Table XLIV. will be found the results of this investigation, which gives the percentage of children suffering from cardiac diseases falling below the various normal averages indicated at the head of each column. It will be observed that at most ages over 50 % are below the normal average, this fact being particularly noticeable in respect to increase in weight. This is a condition which would be expected in these delicate children, and it will be particularly valuable

and instructive to observe whether this subnormal development continues. It would also be valuable to ascertain what growth would be obtained were these children placed under special conditions.

TABLE XLIV.

Heart Disease.			
Age	Below Av. Height. Percentage	Below Av. Weight. Percentage	Below Av. Increase in Weight. Percentage
4	66.00	66.00	...
5	60.00	75.00	...
6	44.44	57.55	20.00
7	33.00	53.33	66.66
8	38.53	46.15	63.63
9	62.50	50.00	62.50
10	75.00	58.33	41.66
11	62.50	50.00	57.14
12	77.77	55.55	75.00
13	50.00	25.00	85.71
14	60.00	60.00	60.00
	54.73	52.63	60.25

In Table XLV. is given the various cardiac conditions found at various periods of school life. Twenty-five children examined for the first time exhibited evidence of heart disease. One hundred and thirty-nine children have been specially examined, and the results are recorded in the Table. Most of these were so examined on account of the presence of a lesion at a previous examination, or, on account of some symptom pointing to such a lesion. In 49 cases the examination revealed a normal condition of the heart. Of children suffering from cardiac diseases those with aortic and congenital diseases are most severely affected. A mild sedentary life is most suitable for such children. Two children with congenital disease of the heart, observed last year, were not seen this year, both having left school.



TABLE XLV.

## Diseases of the Heart.

	Number Examined	Mitral Disease. Number	Aortic Disease. Number	Congenital Disease. Number	Functional Disease. Number
Examined for first time	1085	22	3	...	16
"    on entering Senior Dept.	456	18	1	...	9
"    at 11 years of age	460	13	...	...	7
"    on leaving school	240	2	1	1	3
Special Examinations	139	67	3	...	20
		<hr/> 122	<hr/> 8	<hr/> 1	<hr/> 55

I have had under observation for the past three years one boy who is recorded as having congenital disease of the heart. During the last year, though the cardiac condition remained much the same, the increase in the weight of the child was considerably over 14 lbs.

The examination of the heart of a child is, in any case, a matter of considerable difficulty, but it becomes even more so when such an examination is carried out in the precincts of a school, where extraneous noises are present to interfere with the proper appreciation of the delicate refinements of sound. It is therefore possible that some conditions become incorrectly classified, in spite of all the efforts to estimate the true one. Among the functional diseases of the heart are included such children who present abnormal signs of the heart which appear to be more directly due to the condition of the body generally than to disease of the heart itself. A few of the cases classified under the heading of heart disease probably fall more properly under this class, although the signs they present at the time of examination necessitate their inclusion in the former. Further examinations of such cases will show the correctness or the reverse of this statement.

**LUNGS.**

Taken as a whole, the diseases of the lungs exhibited by the children of this town are not very numerous. In addition to the ordinary examination a special examination has been made in all cases where there has been any evidence of delicacy of the lungs. Particular mention must be made of those children who presented evidence of tubercular disease of the lungs and who number six in all. The whole subject of Tubercular disease in children is considered separately, and I would refer to that paragraph of my Report as calling for very careful consideration. One child was found in a very delicate condition, and on further examination a few weeks later evidence of Pulmonary Tuberculosis was detected. The condition was very acute, and the child has since died. The other children specially examined for this condition remain much the same, except one boy, who has very greatly improved. Much care has been expended on this child by the parents. In fact, in all cases parents have done all that lies in their power for their children.

TABLE XLVI.

**Diseases of the Lungs.**

	Number Examined	Defec- tive Areas No.	Defective Areas and Adventi- tous Sounds No.	Bron- chitis No.	Asthma No.	Tuber- cular Dis- ease. No.
Examined for first time	1085	8	4	23	...	...
"    on entering Senior Dept.	456	6	1	8	...	...
"    at 11 years of age	460	4	1	3	...	...
"    on leaving school	240	1	...	3	...	...
Special Examinations	135	11	4	11	2	6
		<hr/> 30	<hr/> 10	<hr/> 48	<hr/> 2	<hr/> 6

Although it is very desirable and necessary that everything possible should be attempted for children with evident disease, it is even more important to endeavour to prevent disease in those with delicate lungs. There are 42 children whose lungs may be considered unsatisfactory and who require very careful watching. Forty-one children have very greatly improved since the last year, and in them the lungs are practically normal. One boy, who has always been regarded as delicate in this respect, has very greatly improved, and after leaving school chose an outdoor occupation. As evidence of the improvement, it is sufficient to mention that the increase in weight during the twelve months was 17 lbs. Many fewer children have been found during the routine examination this year suffering from catarrhal bronchitis. This has usually been detected among the smaller children in the late autumn, owing to the wet weather usually prevailing at that time of the year. This year the weather was particularly dry and bright, and the decrease in the number found thus affected I largely attribute to this fact. One child only presented signs of acute disease during the routine work. I am of opinion that fewer children attend school with acute conditions than was formerly the case. This is in a large measure due to the much greater interest taken by the teachers in detecting evidence of ill-health among the children and immediately sending affected children home.

### HERNIA.

This condition requires for its relief the wearing of a truss, and for its cure an operation. Thirteen boys, who were found with a hernia at the last examination, re-examined this year presented the same signs. Two boys joining the school and examined for the first time were found with a hernia, and the same number had already undergone an operation for its cure. Ten other boys have also received similar treatment and four were found wearing trusses. Three

others had developed this condition since the previous examination. It is important that a condition such as this should receive treatment, but it is not always easy to make sure that it is obtained. In nearly all boys there is little, if any, discomfort which would render them anxious to seek advice for its relief, and there is consequently a natural reluctance to put up with the inconvenience of a truss or to undergo an operation. It is difficult to convince the boys or their parents of the inability either to enter a public service with this condition, or the danger to life which may follow when the boy grows older and has to undertake hard work. The operation also presents difficulty. A surgical operation in the largest and most convenient of houses is naturally regarded as a trying ordeal by the members of the family, but in the smaller and less convenient houses not only does the operation become more difficult in its performance but the inconvenience so caused is also considerably greater. The outcome of this is that, for the sake of the patient and the home, the majority of cases are treated in the hospitals. In some instances parents are willing and able to pay a small fee for the performance of the operation. Under such circumstances, if thought desirable, I do not think it would be unjust if the practitioners were allowed a fee for operating.

Hernia being uncommon in girls, only 3 cases were disclosed during the examination.

TABLE XLVII.

## Hernia (Boys).

	Number Examined	Hernia Present. Number	Wearing Truss. Number	Radical Cure. Number
Examined for first time . . .	572	2	...	2
"    on entering Senior Dept. . . . .	217	...	...	2
"    at 11 years of age	230	3	...	...
"    on leaving school . . .	111	2	...	1
Special Examinations . . .	...	13	4	5
		<hr/> 20	<hr/> 4	<hr/> 10

## DISEASES OF THE SKIN.

Subjoined will be found a list of the principal diseases of the skin, divided into contagious and non-contagious diseases. (Table XLVIII.)

TABLE XLVIII.

## Diseases of the Skin.

	Boys.	Girls.	Total.
Contagious—			
Impetigo Contagiosa . . .	15	11	26
Ringworm . . . . .	3	10	13
Scabies . . . . .	9	3	12
Favus . . . . .	2	...	2
Non-Contagious—			
Alopecia Areata . . . .	2	2	4
Psoriasis . . . . .	9	3	12
Ichthyosis . . . . .	3	...	3
Eczema . . . . .	6	9	15
Sores . . . . .	15	27	42
Herpes . . . . .	2	1	3
	<hr/> 66	<hr/> 66	<hr/> 132

At the routine inspection 3 boys and 10 girls were found with ringworm of the head, out of which number 6 were examined for the first time. In addition to this number 18 cases were found by the School Nurses and Medical Officers on visits paid to the schools. In all cases the hair has been examined for the particular fungus microscopically. During the year the School Board issued instructions as to the admission to school of children suffering from this disease. Attendance at school can only be allowed when the head is receiving treatment, and the child is provided with a washable cap to be worn during school hours. Until means are provided by which the disease can be eradicated more speedily than by ordinary drug treatment, this appears to be the only way of dealing with these cases. The

disease of itself does not appear to interfere with the general health of the child, and therefore to keep a child so affected from school for a period extending over months does not seem desirable in the interests of education. The present method entails a considerable amount of supervision by the teachers and the nurses. Frequent visits are made to the schools in order to assist in carrying out the regulations of the Board. With a new School Clinic, provision for the treatment of this disease will have to be carefully considered.

Two cases of Favus were found among the boys. Both these cases have received special treatment at a special hospital.

Microscopical examination of the hair has been carried out for the private practitioners in cases where doubt has existed as to the exact nature of the disease or before a certificate has been given as to whether a cure has been effected. I would again repeat my willingness to undertake this examination in all cases where desired to do so before such a certificate is signed. Some cases have been found in the schools which have been returned as cured, but which, on microscopical examination, the disease has been found to be present. Instances such as this have in other places led to considerable friction between the school official and the family physician, but it is gratifying to record that such has not been the case in this town. I would at all times be willing to undertake the lengthy and somewhat tedious microscopical examination of the hair before a certificate of freedom from infection is signed, rather than run the risk of giving offence in the future by performing a very necessary part of my work.

Impetigo was found in 26 cases, but here again 12 were amongst those examined for the first time. The same condition was detected in 74 children at various times on visits to the schools by the nurses and the medical officers. Scabies was present in nine children. The number of children attending school with

sores about the face is very much smaller than it used to be. I think this is in a large measure due to the care taken by the teachers, and the frequent visits paid to the schools by the nurses.

The other cases do not call for special mention.

### MENTALLY DEFECTIVE CHILDREN.

From time to time special reports have been submitted dealing with Mentally Defective Children. Speaking generally, a child who is unable to benefit educationally by attendance at an ordinary school, is a proper subject for special instruction in a special school. In the smaller districts and towns the number of children so affected is not very great, yet the degree of defect in these children may show a wide variation. The number of children in each group is therefore small. This increases the difficulty and proportionate expense of providing special instruction. Allusion has previously been made to the point that one defective child, unless absolutely neglected, as may unfortunately have to be, acts as a drag and hinders the proper progress of a class. The provision of special instruction for such children is therefore not only desirable for the children themselves, but also for those who happen to be in the same class.

It is without the scope of an Annual Report to discuss further the necessity of providing for the education of mentally defective children except to emphasise the importance of supervising many of these children for some considerable time after the usual time for leaving school. This can only be carried into effect by providing a special institution. At the present time no provision has been made for the education and supervision of such children in this town, nor is there any school within reasonable distance to which such children can be sent.

The number of children thus affected in this town

warrants such an institution being established, if not exclusively for the town, in combination with the near districts.

### SPEECH DEFECTS.

Table XLIX. gives the number of children with speech defects. There is little to add to the comments made in previous Reports on this condition. The causes of stammering are obscure, but one factor is certain; imitation plays an important part. It is important, therefore, that children already affected should as far as possible be prevented from affecting others. This can only be accomplished by placing the affected under special tuition with a view to curing the defect. Lalling or baby talk affects three children all of one family. There is also one girl not included in the Table whose speech is very much impaired and is almost unintelligible. This closely resembles a condition known as idioglossia, in which those affected appear to use a language of their own creation.

TABLE XLIX.

Speech Defects.					Boys.	Girls.	Total.
Stammer	.	.	.	.	24	1	25
Lisp	.	.	.	.	8	3	11
Lalling	.	.	.	.	2	1	3
					<hr/>	<hr/>	<hr/>
					34	5	39



## MISCELLANEOUS.

Table L. gives a list of miscellaneous conditions found among the children, which have not been classified under any particular heading.

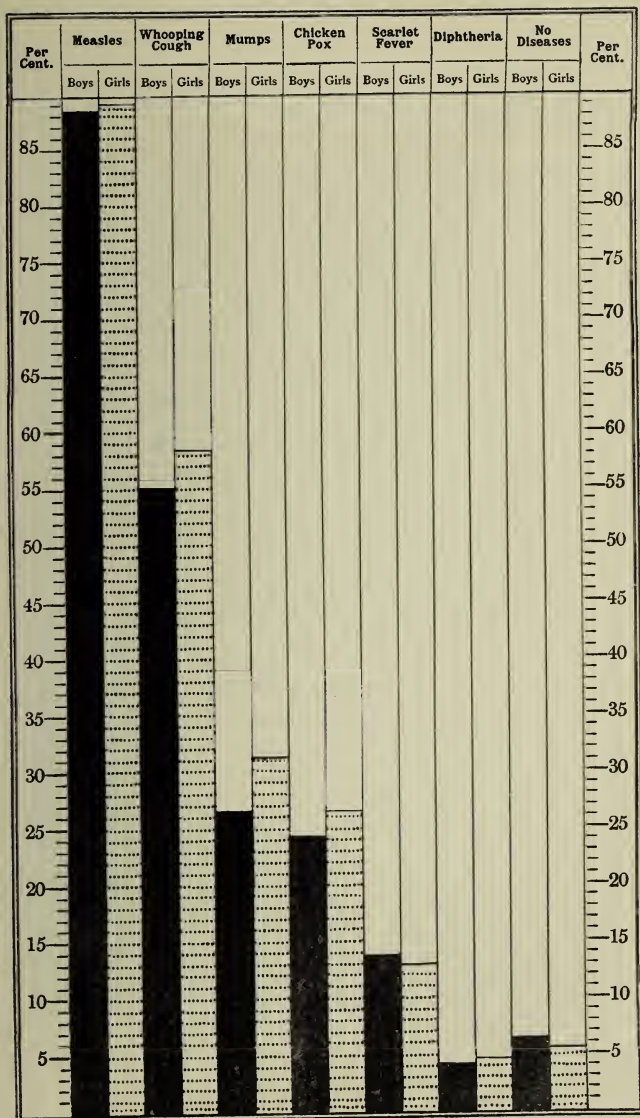
TABLE L.

	Boys.	Girls.	Total
Chorea . . . . .	2	1	3
Infantile Paralysis . . . . .	6	4	10
Epilepsy . . . . .	1	1	2
Hysterical Finger . . . . .	1	...	1
Enlarged Thyroid . . . . .	8	5	13
Parotid Sinus . . . . .	1	...	1
Tracheotomy Wound . . . . .	1	1	2
Torticollis . . . . .	2	1	3
Scars of Operation for Appendicitis	6	...	6
Scars of other Abdominal Operation	4	...	4
Hydrocele . . . . .	1	...	1
Varicocele . . . . .	2	...	2
Acute Periostitis . . . . .	1	...	1
Acute Bursitis . . . . .	1	...	1
Rickets . . . . .	43	14	57
Anaemia . . . . .	114	95	209
Congenital Syphilis . . . . .	1	...	1
Dilated Stomach . . . . .	...	1	1
Facial Paralysis . . . . .	...	1	1
Ganglion of Wrist . . . . .	...	3	3
Acute Rheumatism . . . . .	...	1	1
Chronic Rheumatism . . . . .	...	1	1
	<hr/> 195	<hr/> 129	<hr/> 324

### INFECTIOUS DISEASES.

In Diagram 3 is given the percentage of children who have suffered from various infectious diseases. There is a slight increase in the number of children who have had scarlet fever. Throughout the year this has been again prevalent, particularly during the months of January and November, and the attendance at some of the schools was somewhat seriously affected in consequence. A considerable amount of absence was caused by children having to remain in quarantine owing to the disease in the house affecting children not of school age. There can be little doubt but that scarlet fever is infectious as soon as the sore throat is present. This is the stage when children are frequently present in schools and in times of epidemic the admission of children to school with sore throat is a frequent source of infection. The disease appears, with grave exceptions, to be of a mild character. The characteristic rash being of a very transient nature, medical advice is either not sought at all or obtained when there are no characteristic symptoms. Three children have been detected in the schools with well-marked desquamation. In this respect the teachers are much more watchful than formerly, and a careful inspection is made by them of all children likely to be infectious. One boy and one girl were found at school with the disease in an acute form. All these cases were subsequently notified to the Medical Officer of Health. I would draw particular attention to the possibility of transmission of all infectious diseases taking place by means of pencils, pens, slates, and particularly the materials used in manual work such as modelling clay. This latter is, I believe, a great source of infection. It is kept for a considerable time and is used by a large number of children. Acting on my recommendation the use of it was discontinued for a time in one school where scarlet fever was prevalent among the scholars. I should be glad to see its use

DIAGRAM III.





done away with altogether and some material which could be used fresh every time take the place of it. Eleven children were detected in an infectious state with chickenpox and four with mumps. The character of these diseases and the duration of infection is not understood by the parents, and children are too often sent to school while still in an infectious condition.

In the accompanying diagram it will be seen that very few children pass through the period of school life without being attacked by measles. The character of this disease makes it one of a very infectious nature, particularly in the early stages. This, together with the prevalent idea that measles is of little consequence, accounts for the large number of children affected. It will be well when parents recognise that measles is a disease which is often severe and may prove fatal.

School closure has not been enforced on account of any disease during the year. I do not think closure of one particular school would do much to prevent infection, as in this town it is very common to find children of one family going to different schools. This accounts to some extent for the spreading of a disease through different parts of the town.

### **SCHOOL NURSES.**

During the year the School Nurse, the first School Nurse in Scotland, resigned, and Nurse Hobbs was appointed to take her place. In November Nurse Wilson was appointed as Assistant School Nurse. That a second Nurse is needed to carry out the work is ample proof, if such is required, that this work has met with the success which was predicted for it. It is gratifying to report that the work of the Nurses has been, and is, meeting with universal approval. Much of this success is due to the energy, skill and tact of the Nurse who instituted the work. The work of the Nurses consists of (1) assisting at the medical examinations when required; (2) periodical visits of inspection

to the schools; (3) visiting the houses of parents; (4) assisting at the School Clinic. It has been suggested by some that it is a waste of the time of a skilled person to assist at the medical examinations of the children; much of such work consisting of the removal and replacing of the clothes of the children. Such work could undoubtedly be performed by less skilled persons, but a trained and efficient Nurse is also able to detect and note minor conditions at the same time as the examination for major defects is proceeding, and is also able to give help on matters of personal cleanliness, &c., to the children. Getting into personal contact with the children is also a great help and a great advantage when visits have subsequently to be paid to the children's homes or further inspection made at the schools. During last winter talks were given to the mothers of children attending the schools, and were arranged in a series of three lectures and delivered in various parts of the town. The attendance in all instances was most gratifying, on one occasion exceeding 300. This showed that a real interest is felt by the parents in the welfare of the children and a desire to learn such things as might prove useful in their upbringing.

A summary of the work of the School Nurses is given below:—

Visits to homes of children	...	...	...	...	...	595
Visits of inspection to schools	...	...	...	...	...	68
Assisting at the School Clinic	...	...	...	...	...	
Assisting at the medical inspection of	2431	children.				

### THE SCHOOL CLINIC.

This institution was opened in February 1910, having been agreed upon after a meeting between the Trustees and the medical practitioners of the town. Few innovations have aroused more discussion among members of the medical profession than School Clinics, and, therefore, it would seem desirable to outline in

detail the scheme which has been adopted and which, I have every reason to believe, has proved satisfactory. In the first place, it has to be realised that medical inspection is of little value unless it secures treatment for defects found among the children. The School Clinic is meant to supply treatment for those whose parents are unable to afford or carry out the necessary treatment. It should in no way supersede or replace the position of the family medical attendant. It is occasionally said, and with schemes of State medical service and what not in the air, one has reason to believe it is very seriously considered, that the day of the family medical attendant is past. Though I have the honour to belong to the profession, I say without hesitation that it will be an unfortunate thing for the sick and suffering of the nation when the family physician ceases to exist, and medical attendance is supplied by the State-paid official. Few, if any, professions can boast the same ungrudging sacrifices in time and skill that are daily given by the members of this profession. A School Clinic should, therefore, in my opinion, not interfere with the practice of the family physician. With this end in view the reasonable starting-point is that every child shall first of all be seen by his own doctor. If he considers that the parents cannot afford or are, through home circumstances, unable to carry out the treatment he desires, then he can refer them for treatment to the School Clinic. The majority of parents can afford a single fee though many may be unable to afford a succession of fees for treatment protracted through several weeks or months. There are few, it is doubtful if there are any, members of the medical profession who would refuse to examine a child and sign a letter without payment, although they are perfectly entitled to a fee, and it is the duty of the State, if necessary, to supply that fee if the parents, through no fault of their own, are unable to pay it. It should be at once recognised that a School Clinic is not instituted because the family physician

is unable to provide requisite treatment, but because he is unable personally to bear the expenditure of time and money required for the treatment, and it is unreasonable and unjust to expect him to do so. With this end in view, the School Clinic was commenced, and with the co-operation and assistance of the doctors of the town has been carried out during the past eleven months. As a preliminary establishment, two rooms have been set apart in one of the institutions of the Carnegie Dunfermline Trust and various alterations made on them to make them as far as possible suitable for the work. The sum of £120 was expended on these alterations and on furnishing with necessary appliances.

The following is a copy of the letter which is directed to the "Family Doctor" under cover of a letter to the parents of a child requiring treatment:—



## Carnegie Dunfermline Trust.

MEDICAL INSPECTION DEPARTMENT,  
DUNFERMLINE.....191...

DEAR SIR,

I have examined.....and find  
he has .....  
I have therefore advised the Parents to seek your further  
advice. Should you think the case suitable for treatment  
at the School Clinic, would you kindly sign below and give  
to the Parents.

Yours faithfully,

Name..... S. No. ....  
School ..... C. No. ....

### TREATMENT

Date..... *Signature*.....

It will be seen from this letter that the sending of the child to the School Clinic rests entirely with the family physician, and space is provided on this letter for him to prescribe the treatment if he desires to do so. The cases that have been dealt with during the year have been confined to non-operative conditions. The letter having been signed by the private practitioner, the treatment is carried out by the School Medical Officers. Observations on this subject of treatment by these officials in School Clinics in a leading medical journal are worth quoting:—"Doubtless the Medical Inspector will in the large majority of cases be competent to discharge the duties of his post, but he will almost necessarily often be comparatively inexperienced, and however competent he may be to deal with the commoner defects revealed by inspection, it cannot be expected that he will be an all-round expert, able to treat the various defective conditions of the eye, the nose, the ear, and the teeth." I do not think there are any Medical Officers in charge of School Clinics who would lay claim to be expert in all these various branches of surgery. In view of this, it is suggested that the treatment carried out in School Clinics should be in the hands of officials other than the School Medical Officers, and the services of experts in each particular branch of surgery should be obtained from the practitioners of the district in which the Clinic is situated. In those districts in which experts can be obtained the scheme as outlined has undoubted advantages. I do not, however, think that in all cases this arrangement would be of advantage to the private practitioners other than those appointed to the Clinic. It must also be remembered that in smaller districts the most competent expert is fully engaged in his private work and would have little or no time to devote to the School Clinics.

It is presumable that the above journal in referring to treatment includes operations of various descriptions. The question as to how far operative

treatment in School Clinics is advisable is too wide to be considered in an Annual Report. The question is a very important one, and will have to be considered in the near future. The main objection raised against School Clinics in the first instance was their interference with the work of the private practitioners. So far as possible we have eliminated this in Dunfermline in a way that I do not think the appointment of experts would have done. School Medical Officers themselves have, I feel sure, no desire to undertake the work of School Clinics where others more competent are appointed.

The School Clinic in Dunfermline is open in the afternoon after school hours on every week day except Saturday, when it is open in the morning. This has entailed a vast increase in the work of the School Medical Officers, but it has been willingly undertaken for the benefit of the children. If a special official or officials are appointed who are experts in the various branches they undertake, there is little doubt that the value of the work of the Clinic might be enhanced. I have alluded previously to the need of an ophthalmic surgeon in connection with the vision of the children. In the meantime it is well, I think, to carry on the work as at present.

1484 cases have been seen at the School Clinic by the Medical Officers. Many children either came of their own accord or were brought to the Clinic by their parents in the first instance. In all cases where necessary they have been referred to their own Medical Attendants. Those that are not sent to the doctors are of that nature, *e.g.*, dirty heads, small sores, &c., which would not in any case come before their notice and which, at the meeting of the practitioners, it was agreed need not be referred to them. The Nurses deal with them mainly by giving instructions to the parents. A certain number of the letters sent to the doctors do not reach their destination. Being unable to obtain treatment at the Clinic, treatment either at home or at the hands of a chemist is frequently substituted.

The number of attendances since the opening of the Clinic is 15,833, giving an average attendance of 10.6 per child.

### **Dental Department.**

In September another part of the same institution belonging to the Carnegie Dunfermline Trust was fitted up as a Dental Department, and Mr. L. Storrow Shennan appointed as a part-time School Dentist over a period of 9 hours a week. This arrangement must be regarded as purely experimental in character. No one could think that the amount of time thus given to this work can in any way overtake the treatment required. There existed a feeling, however, that children and their parents would not avail themselves of this branch of the Clinic. The attendances of the children up to the present must prove that there is no reluctance on the part of either children or parents to secure dental treatment. The attendance of children of all ages seeking treatment has handicapped the carrying out of the scheme outlined, viz.:—the treatment of an age group. It will be essential, if any practical good is to result at all from the short time now spent on dental treatment, to refuse treatment to all but selected and urgent cases. Even with an expert devoting his whole time to this work it must take several years before the necessary treatment has been given to all the children requiring it. It will be clearly seen that there is more than enough work for one dentist on referring to the work that has been done during the past three months. It is necessary to draw attention to the fact that, in dental treatment, the children treated in one year will have to be inspected, and in many cases will require some treatment in the next year if the work is to give satisfactory results. If it were merely putting a child's mouth in order once and for all the difficulty would be lessened. The work will, of course, be reduced once all the mouths have been under treatment.

The employment of a sufficient number of Dental Surgeons must be an expensive matter, particularly in large centres of population. It seems, however, that a great deal of the work might be done by skilled and trained assistants working under the supervision of a Dental Surgeon, much in the same way that a skilled surgical nurse is capable of dealing with many cases of minor surgery. The preparation of a cavity in a tooth, or the filling of the tooth with the necessary material, following the instructions given by the Dental Surgeon, might be successfully undertaken by trained assistants. In this way I think a greater amount of work might be overtaken. I make this suggestion with all deference to the Dental Surgeons, who are able to say whether such work can be done in this way. If it is possible, then one or more experts with several assistants might successfully cope with all the children in large towns at a reasonable cost, which cost, by employing only Dental Surgeons, is necessarily extremely large, and deters many authorities from undertaking the work at all. Subjoined is the Report submitted on the work of the Dental Clinic since its inception in September.

*To the Chairman and Members of the  
Carnegie Dunfermline Trust.*

GENTLEMEN,

I have to report on the working of the School Dental Clinic of Dunfermline since it was instituted by the Carnegie Trust in September of the present year.

As the equipment of the Clinic was not complete at the beginning of the school term, I occupied the time available in visiting two of the schools and examining the children.

In view of the large number to be examined and treated, I decided, in consultation with Dr. Bridge, that

it would be advisable to commence with children at the most critical age—dentally—from 7 to 9 years, that, speaking generally, being the period of transition from the temporary to the permanent set of teeth.

During September, children of this period were examined in two of the schools—Queen Anne and St. Margaret's—and it was intended to treat them thereafter systematically at the Clinic. This intention, however, could be carried out only in part, because large numbers of children came voluntarily to the Clinic from all the schools desiring treatment. As a result, children of all ages have been attended to during the last three months.

Upon the 4th October sufficient equipment was forward to enable treatment, as distinct from examination, to be commenced, and since that date 213 children have been treated, whose ages vary from 4 to 14 years, as shown by the following table:—

TABLE LI.

## The Ages of Children Treated.

Girls					Boys					Grand Total
Age	Oct.	Nov.	Dec.	Total	Age	Oct.	Nov.	Dec.	Total	
4	...	...	...	...	4	...	2	...	2	2
5	...	1	1	2	5	1	2	2	5	7
6	1	3	6	10	6	...	4	2	6	16
7	3	3	7	13	7	2	1	1	4	17
8	6	14	16	36	8	6	1	2	9	45
9	3	8	9	20	9	2	4	4	10	30
10	...	4	9	13	10	...	4	2	6	19
11	1	10	15	26	11	1	2	3	6	32
12	...	3	6	9	12	...	2	2	4	13
13	1	4	6	11	13	1	...	...	1	12
14	...	1	1	2	14	1	...	...	1	3
age not stated	2	6	5	13	age not stated	3	1	...	4	17
17	57	81	155		17	23	18	58	213	

Total Number of Girls, 155.

Total Number of Boys, 58.

### Details of Treatment.

Fillings inserted:—October, 80; November, 135; December, 126—total, 341.

Extractions:—October, 34; November, 69; December, 87—total, 190.

In four cases second dentition teeth were removed on account of acute pain caused by them, and in one case an abnormal or supernumerary tooth was removed. The number of visits paid by children to the Clinic was 410:—82 in October, 165 in November, and 163 in December.

The children seem to require no compulsion to come to the Clinic, and I have no doubt that this is in great measure due to the tactful and kindly manner in which they are taken in hand by Mrs. Bridge and Nurse Wilson.

Parents who have been able to accompany their children to the Clinic seem to appreciate the work done for them.

As it is essential for the preservation of the teeth that the children themselves should be trained to cleanse them regularly, the School Clinic furnishes tooth-brushes and powder at a very small charge. Even in my short experience of them, the children who have already come to the Dental Clinic are interesting themselves in this matter, and I can already note a marked improvement in the appearance of their teeth and in the conditions of their mouth generally.

During the 15 school weeks, down to the close of the year, 164 hours have been occupied in the work, being an average of 11 hours per week.

In conclusion, it is impossible, as yet, to judge of the complete success of the Clinic, but the results even now apparent justify one in anticipating that this will be proved without doubt during the next few months.  
—Yours faithfully,

L. STORROW SHENNAN, L.D.S., Edin.,  
and D.D.S., University of Pennsylvania.

December 30, 1910.

## PHYSICAL INSTRUCTION.

This Report would be incomplete without reference to this subject. The Physical Training of the children in the schools is carried out by the gymnastic teachers of the Carnegie Dunfermline Trust and under supervision by the students of the Dunfermline College of Hygiene and Physical Training. Being intimately associated with the schools and with the College, it is possible to look upon physical training from both points of view, namely, that of the child and that of the teacher. The system that has been taught during the past year in the schools is that based upon the Swedish System. While it is a system that is now almost universally taught, I do not think that it is necessarily in all respects the ideal system. The girls are taught the Swedish System by the staff and students (under supervision) of the Women's College up to the Supplementary Classes. When they reach that standard they come under the control of Miss Moseley and her assistant, Miss Dowling. Under these teachers, though the work is kept on very similar lines, there is more latitude. Exercises and music have been introduced which do not, correctly speaking, fall along the true line of Swedish gymnastics as applied to school children. I am of the opinion that this is a desirable addition, and such innovations are to be encouraged when they tend to increase the brightness and interest of the children. The boys from the time they enter the Senior Schools until they leave school are taught by the staff and students (under supervision) of the Male College. The system is practically the same, though there is less strictness preserved in adherence to the details of the Swedish System. There are several points to which attention in regard to the gymnastic instruction should be drawn. Some of them affect the children, while others affect those teaching. In the first place, the amount of time allotted to the



subject is a comparatively small one as compared with other subjects in the School Curriculum. The subject must be regarded as educational, recreational, and corrective. It must be remembered that many authorities look upon it as purely educational and corrective, and consider that the mental energy used up is as great, if not greater, than that required by any other subject taught in the schools. While, however, a gymnastic lesson may be given with the educational and corrective elements present, it should still remain to a large extent recreational in character. Whether we regard it as educational, corrective, or recreational, or all three combined, the time has come when we ought to consider its value. If it is of value, could that value be increased if more time was allotted to it? If it is of little or no value, then it is time that the period allotted should be given over to some subject more educational, more corrective, or, better still, more recreational. As School Medical Officer, I have been struck by the number of children who, for very trivial reasons, absent themselves from the gymnastic classes. The question has naturally forced itself upon me as to why this should be the case, and I am led to the conviction that there are two main factors which lead to this. They are (1) the system taught, and (2) the nature of the teaching. (1) It is not within the province of a Report to enter into a discussion of a system of physical training, but it is sufficient to give what I believe to be the reason why this system fails to elicit the enthusiasm for which one would look and hope. Firstly, to children the positions are strained and tend to become monotonous; secondly, the system lacks that force, vitality, and spirit of rivalry which is so essentially a part of the British child's idea of any occupation other than mental work. Whether this spirit should be checked or not is a matter for consideration. It will take many years to eradicate the hereditary principle of the ages. (2) On this point it is necessary not to be misunderstood. Much of the teaching is done by students,

among whom some must of necessity be capable, others more or less incapable, especially at the commencement of their training. Though it is of undoubted advantage to have a College for training teachers in connection with the schools, yet, to some extent, the benefit the children might derive from their classes is reduced by the natural incompetency of many of the students conducting the classes. Many of the bad points of the system are thus emphasised, *e.g.*, monotony. For example, a student will persist in repeating an exercise in order to have it done exactly, where a more experienced teacher would get the required result with little or no repetition or by substitution.

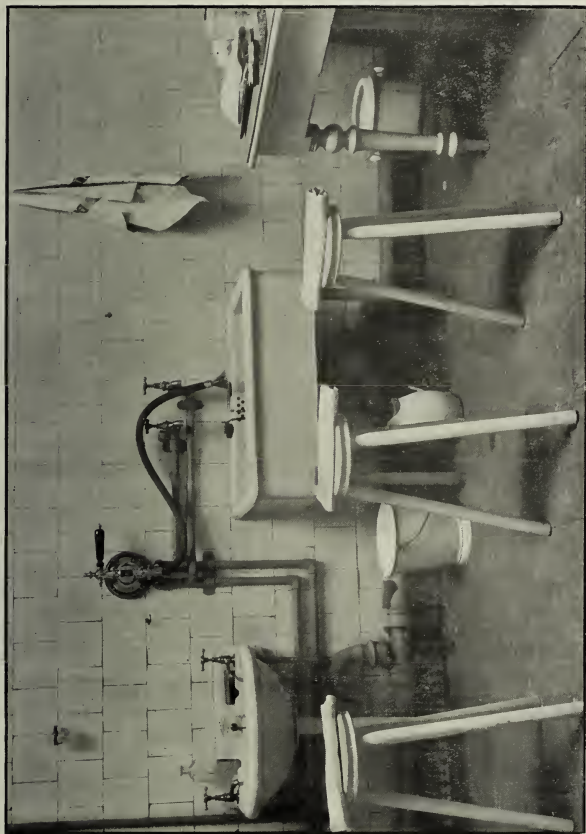
In addition, the terms for students do not correspond to the school terms, the latter far exceeding the former. The gymnastic work is, under these circumstances, as far as possible undertaken by the staffs. The children must necessarily suffer during the College vacations.

A greater uniformity in the College and School terms would be of advantage to this branch of the work.

I have the honour to be, Gentlemen,

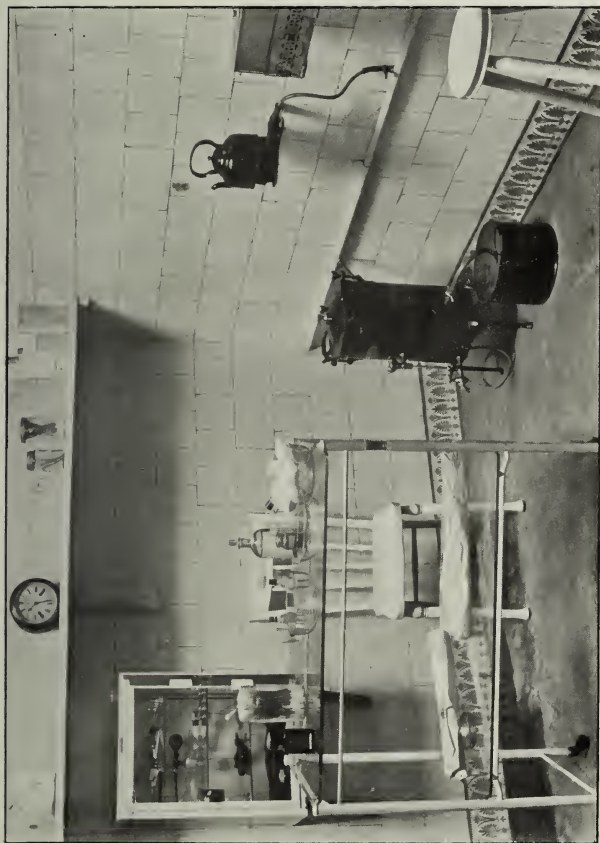
Your obedient servant,

JOHN C. BRIDGE.



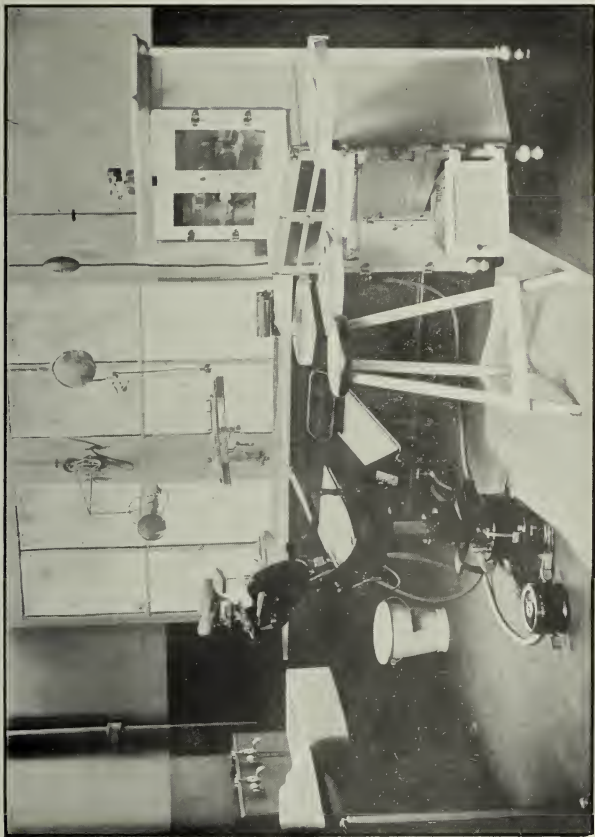
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